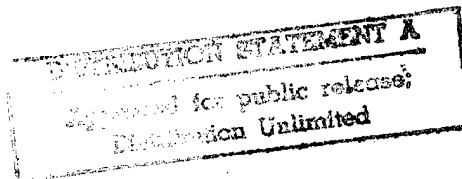


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# USSR Report

AGRICULTURE

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3 August 1984

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### MOSCOW REPORTS AGRICULTURAL DEVELOPMENTS 22 JUNE-4 JULY

22-23 June

LD240210 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 22-23 June. Times of broadcasts are given in parentheses at the end of each item.

22 June

Mass fodder harvesting has started in Kurgan Oblast. (0204 GMT)

Haymaking has begun in Omsk oblast. (0204 GMT)

Two-thirds of grasses have been cut in the Ukraine. (0400 GMT)

Fodder harvesting is proceeding rapidly at Altay Kray. (0400 GMT)

Grain harvest was begun today by farmers of central regions of the Kalmyk ASSR. The whole grain area occupies a third of a million hectares in the republic. (1200 GMT)

23 June

Preparations for receiving the grain harvest have been completed in Altay Kray. It is usually rainy here, so grain driers have been made ready. (0001 GMT)

Krasnogvardeyskiy Rayon farmers are the first in Stavropol kray to start reaping peas and barley. (0204 GMT)

In Bryansk Oblast potato field work is under way. Field work is under way on sunflower plantations in the Ukraine, where this crop covers around 1.5 million hectares. (2005 GMT)

24-25 June

LD260618 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in

Russian on 24-25 June. Times of broadcasts are given in parentheses at the end of each item.

24 June

In the south Kuban the barley is ripe. Combines will be used in two shifts. (0204 GMT)

Bekabad is one of the first rayons in Uzbekistan to finish the grain sales plan. This year Uzbekistan plans to raise production of grain crops to 3 million tons. (0400 GMT)

Second mowings are being made in Osh Oblast and Chu Valley of Kirghizia. Grass has been mown in the republic on 300,000 hectares. (0400 GMT)

In Kazandzhik steppe, Turkmenistan, with the arrival of water from the Kara-Kum canal crops are now being irrigated. (0400 GMT)

In Checheno-Ingush ASSR harvesting of barley is under way. (1300 GMT)

In Kara-Kum, the harvest of melons and watermelons has begun. (1300 GMT)

Harvesting of early-ripening strains of barley has begun in the Mordovian steppe. (2005 GMT)

In Dzhambul Oblast, 580,000 hectares of cereals will be harvested and threshed, and 2,700 combines have been overhauled. (2005 GMT)

25 June

Shock haymaking month starts in Orenburg Oblast. (0001 GMT)

In Omsk Oblast, grasses have been mowed on 100,000 hectares. (0600 GMT)

In Moldavia, preparations for grain harvesting is complete: procurement of strong varieties of wheat is to be increased this year; this crop occupies almost 100,000 hectares. (1300 GMT)

The month of fodder procurement started in Orenburg Oblast. (1750 GMT)

Fodder procurement in full swing in the Tuva ASSR. (1750 GMT)

Grain harvesting has started in Dagestan. (2230 GMT)

Kuban farmers are planning to produce 4,315,000 metric tons of grain this year. Threshing is under way. (2300 GMT)

26-27 June

LD280414 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in

Russian on 26-27 June. Times of broadcasts are given in parentheses at the end of each item.

26 June

Grain will be delivered to 3,700 reception and processing enterprises which can unload from trucks up to 6 million tons and dry no less than 3 million tons daily. Re-equipping of the industry continues. This year more than 100 elevators will have new high-productivity equipment permitting a 50-100 percent increase in processing. Many new granaries will be commissions for the grain reception season. Grain reception facilities are largely ready. In the south they should be ready by 1 July and other areas by 1 August. (0100 GMT)

In Kazakhstan a shock month of forage gathering has been proclaimed. The republic has over 300 million hectares of grass for mowing; it is planned to supply for public animal breeding 16 million tons of hay, over 3 million tons of haylage, 305,000 tons of vitamin-rich grass meal and much else. (0001 GMT)

Kurgan Oblast industrial enterprises have formed 200 mechanized detachments for harvesting. (0204 GMT)

Harvesting has started in Kirghizia's Chu Valley. (0400 GMT)

Uzbekistan is ready for harvesting. (0600 GMT)

Sale of grain to the state has begun in the Kuban and south Kazakhstan. Harvesting also has begun in Stavropol Kray, where grain will soon reach elevators and grain reception centers. Great attention is being given to the quality of grain handed over to the state. The quality of grain was the main subject today at an all-union conference which has opened at Kokchetav. The conference is discussing ways to stabilize production of high-quality grain, regardless of weather conditions. Omsk Oblast, Stavropol, Kray, and many oblasts of northern Kazakhstan have good experience with such work. The country needs high-quality wheats to expand the range of foodstuffs. They improve the baking qualities of average grain. They are indispensable for the production of macaroni and confectionery products. (1800 GMT)

Kazakhstan has begun selling bread grain to the state. (2300 GMT)

27 June

Kuban grain deliveries have started. (0001 GMT)

Daghestan's first grain delivery has been made to the big grain combine. (0001 GMT)

South Saratov Oblast has begun its second mowing of alfalfa. (0001 GMT)

Many Uzbek farms are selling grain above plan. (0204 GMT)

Mass harvesting of winter barley has started in the Crimea; cereal crops cover 600,000 hectares here. (1100 GMT)

Grain combine harvesters today began work in the fields to the south of the Central Black Soil Zone. Mechanizers in seven oblasts of the Ukraine, many parts of the North Caucasus and all republics of the Transcaucasus and Central Asia are now harvesting grain. Winter grain crops and winter pulses are ripening almost simultaneously in most places. Weather conditions are good in many parts of the European part of the country. Haymowing is rapidly gaining speed. Stocks of silage are being procured earlier than usual. (1800 GMT)

29 June-1 July

LD020042 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 29 June-1 July. Times of broadcasts are given in parentheses at the end of each item.

29 June

Inspite of the rainy summer, Belorussia intends to lay in almost 4 million tons of hay this year which is considerably more than last year. (0800 GMT)

The machine operators of Chimkent Oblast have started mass harvesting. Having obtained quite a good harvest of cereals in complex weather conditions, they have now organized a highly productive use of agricultural machinery. All complexes and detachments are operating almost round the clock. Work for fodder procurement, tilling of cotton plantations and of corn for grain, is going on a large scale. In the neighboring Dzhabul Oblast, having started in an organized manner the harvesting of grain crops, the crop growers are simultaneously perfecting the care of sugar beet and other crops, and they are struggling for strengthening the fodder base. (1530 GMT)

30 June

Simultaneous harvesting and sowing is in progress in the Crimea. Work has been completed on behalf of the total area earmarked for second sowing. Over 3,000 hectares are being sown every day.

Haymaking is in full swing in Pavlodar Oblast. Over 100,000 tons of hay, haylage and vitamin-rich grass meal have been laid in. (2300 GMT)

1 July

In Kazakhstan grain crops have been gathered in on 150,000 hectares. Grain harvesting is in full swing in Chimkent and Dzhabul Oblasts. Alma-Ata Oblast today began selective cutting of barley and wheat. (0700 GMT)



2-4 July

LD050003 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 2-4 July. Times of broadcasts are given in parentheses at the end of each item.

2 July

In Kuban mass sowing of stubble crops, corn, millet, and buckwheat has started. (0204 GMT)

Fodder crops have been harvested on 225,000 hectares in Ryazan Oblast 2 million tons of coarse fodder have been prepared in Uzbekistan and 1 million tons of hay, haylage and vitamine grass meal. (0600 GMT)

The harvesting of grain crops in Turkmenia is over. The best yields were obtained in Gyaurskiy Rayon--28 q/ha; the lowest yield was that in Tedzhenskiy Rayon--14.4 q/ha.

On the whole, the 1984 harvest can be considered as successful. There has been some increase in the average yield for the republic. There were 895 combine harvesters available for the grain harvest, but only 550-600 were in operation during the height of the harvest: some farms still underestimate the importance of grain crops. (1100 GMT)

About 400,000 tons of hay have been procured in Tselinograd Oblast. (2230 GMT)

Dnepropetrovsk Oblast has started cutting winter wheat. (2304 GMT)

3 July

Winter wheat and barley has been cut on an area of 26,500 hectares in Tajikistan. (0200 GMT)

Ferghana Oblast was the first in Uzbekistan to complete grain harvesting. In the republic as a whole winter cereals have already been harvested from half of the entire acreage. (0204 GMT)

Omsk farmers have laid in the first 10,000 tons of fodder. (0600 GMT)

In Kazakhstan grain crops have been harvested and threshed on nearly 320,000 hectares to date. (1100 GMT)

4 July

Mass cereal harvesting began today on the farms of Chechen Ingushetiya. (0430 GMT)

Odessa farms start mass harvest. (1300 GMT)

According to data, by 2 July, grain and pulses, without corn, have been cut on 3.8 million hectares and threshed on 2.1 million hectares. Sixteen million tonnes of hay, 29 million tonnes of haylage and more than 2 million tonnes of grassmeal have been laid in. (1830 GMT)

CSO: 1824/566

## LIVESTOCK

### PROBLEMS, PROSPECTS OF UKRAINIAN LIVESTOCK SECTOR REVIEWED

Kiev EKONOMIKA SOVETSKOY UKRAINY in Russian No 4, Apr 84 pp 20-30

[Article by M. Garbuz, department director of UkSSR Gosplan: "The Development of Livestock Raising--The Most Important Condition for Implementing the Food Program of the USSR"]

[Text] The successful implementation of goals to raise the standard of living of the Soviet people set by the communist party requires, as emphasized at the November (1982) Plenum of the CPSU Central Committee, the transition to an intensive path of development of public production, an efficient utilization of existing potential, an improvement in economic activities, an acceleration of scientific-technical progress and an improvement in work quality.

The main goal of the country's Food Program involves increasing the production of food products and especially--improving their assortment and quality. During the early years of Soviet power V. I. Lenin noted that in solving food problems it is necessary to keep in mind "how much bread, meat, milk and eggs and so forth a man needs according to science, i.e. the norms, not for the number of calories but for the quality and quantity of food."<sup>1</sup> For this reason the main way to deal with this problem has to do with increasing the consumption of animal products.

At the present time a large agro-industrial food complex has developed in the Ukrainian SSR; in it one of the leading places is occupied by livestock raising. As of late 1982 47 percent of all fixed production capital earmarked for agriculture was directed into this branch. During the years of the 10th Five-Year Plan the proportion of gross livestock production within total gross agricultural production comprised 52.4 percent (as compared with 50 percent during the Eighth), including in the public sector--48.2 and 43.8 percent respectively. In the republic during this period the production of meat from livestock and poultry increased by 28.3 percent, of milk--by 21.4 percent and of eggs--by a factor of 1.6. There was also an increase in state procurement of livestock products and an improvement in the quality of livestock products.

These results were achieved thanks to the constant concern for the development of this important branch of agriculture on the part of the state. During the last three five-year plans there has been a significant strengthening of the material base of kolkhozes and sovkhozes; highly productive machines and mechanisms have appeared on livestock farms. Significant work has been done

<sup>1</sup> Lenin, V. I. "Poln. sobr. soch." [Complete Works], Vol 40, p 342.

to strengthen production specialization and concentration, to expand inter-enterprise ties and to introduce industrial production methods, to develop feed production and improve breeding-selection work and to improve the scientific foundation for planning and material stimulation.

Great and complex objectives have been placed before the livestock farmers of our republic for the years of the 11th Five-Year Plan and for the more distant future. It is essential to secure a significant growth in the production and procurement of livestock products and to more fully satisfy the population's needs with regard to them. Since in 1981-1982 for well-known reasons there was practically no growth in the procurement of livestock products (especially meat and milk), it will become more complicated to solve this problem in the near future.

The main ways to increase the effectiveness of livestock raising involve increasing production output by means of qualitative improvements in the herd, of constantly introducing the achievements of science and progressive practice in the areas of selection and breeding work, of improving the reproduction of the herd and the technology of reproduction, of improving the organization of feeding of animals and securing full-value rations for them and of more fully realizing the potential of the breeds of livestock and poultry being raised.

The cardinal direction in the development of livestock raising at the contemporary stage is improved effectiveness. This complicated task must be dealt with under conditions of limited resources. Exhausted are the possibilities for introducing into rotation new agricultural lands (especially in the southern regions of our republic); there is a shortage of labor resources and a limited growth in capital investments in agriculture, etc. An increase in farm production must be secured primarily by the more effective utilization of feed and other material-technical resources. Now, in contrast to the preceding five-year plan, when the greater share of capital investments was directed at the building of livestock raising complexes, they will be focused primarily on the development of a stable feed base for agriculture and on the renovation and expansion of livestock facilities.

At the present time, with the goal of extensively introducing into practice the achievements of scientific-technical progress, in livestock raising expenditures for expanding the reproduction of fixed production capital in this branch are increasing at a rapid pace. In 1965-1982 fixed production resources for agricultural purposes available on farms and in complexes of kolkhozes and state enterprises increased by a factor of 3.8 (including in sovkhoses and other state enterprises--by a factor of 4.9), or on the basis of each standard head of cattle maintained in the public sector--from 320 to 925 rubles, or by a factor of 2.9.

Livestock production in kolkhozes has remained unprofitable in recent years; in sovkhoses--of low profitability. On the one hand this phenomenon is related to the intensive saturation of the branch with machines, equipment and mechanisms, to the multi-faceted technical reconstruction of production and the introduction of complex mechanization of labor processes in livestock

raising and to the accelerated replacement of fixed production capital in the branch, which is characterized by great longevity and great productivity. On the other hand, the inefficient use of production capacities based mainly on the low productivity of animals is also having a considerable effect. Thus, during the last decade the average daily weight gain in fattening cattle alone comprised 530-550 grams during some years (as compared to 700-800 grams as the norm); of fattening hogs--305-325 grams respectively (as compared to 400-450 grams). The largest annual milk yield obtained per cow in the public sector did not exceed 2,600 kilograms.

A drop in the profitability level of the branch is also the result of the aforementioned reasons, but it is also related to the fact that many capital-intensive objects have been built and that wholesale prices for building materials and for the means of mechanization have been increased. Naturally, such changes have resulted in an increase in the cost of a livestock place.

In addition to the insubstantial growth in animal productivity we must note the shortcomings in organizational work related to the introduction into production of progressive experience, to securing farms with a sufficient quantity of highly trained cadres and to creating normal production and living conditions for them.

The continued development of livestock raising requires the implementation of a wide complex of interrelated measures to raise the effectiveness of production within the branch with the goal of achieving maximal end results in production. Let us look at the more important of these measures.

There is no doubt that one of the most important factors which must facilitate the successful fulfillment of goals set before livestock raising with regard to increasing livestock production output is strengthening the branch's feed base. During the years of the 10th Five-Year Plan the output of feed per hectare of sown feed lands in kolkhozes and state enterprises in the republic increased (in comparison with the Eighth) by a factor of 1.5, reaching 29.8 quintals of feed units. Moreover, in Chemovtsy Oblast it reached 44.3 quintals of feed units, in Cherkassy--38.6, in Transcarpathian--36.8 and in Kiev Oblast--35.2 quintals of feed units. During this same period feed expenditures per standard head of livestock increased from 25 to 28.1 quintals of feed units, including in the steppe zone--from 24.2 to 26.7, in the forest-steppe--from 25.7 to 29.6 and in the Poles'ye zone--from 23.8 to 28.6 quintals of feed units.

Nevertheless, the needs of public livestock raising with regard to feed are not being fully satisfied; their overconsumption (as compared to existing norms) for the production of a unit of production is being tolerated within the branch. Here the pace of development of feed production is lagging behind the pace of growth of the herd of livestock. Thus, on the average for 1976-1980 the quantity of feed expended for the needs of public production increased (as compared with 1966-1970) by 42 percent; and calculated on the basis of each standard head of cattle--by only 12 percent. In some oblasts of our republic this difference is even greater. In recent years only 25-28 quintals of feed units have been expended per standard head of cattle (as compared with 33-35 quintals of feed units according to scientifically based norms).

In turn, the shortage of feed resources and the unbalanced rations for animals with regard to protein are having a negative effect on the schedule for raising and fattening them, result in an overconsumption of feed for the production of a unit of weight gain and in the final analysis accentuate the feed deficit. The scientifically-based level of feeding necessary for the fattening of cattle enables us to increase live weight to 380-400 kilograms in 16-18 months; in other words the coefficient of intensity of fattening cattle--the ratio of live weight (in kilograms) to age at slaughter (in days)--fluctuates within the limits of 0.7-0.8. In recent years the sales weight of each head of cattle has equalled 305-310 kilograms in the republic's kolkhozes; of hogs--100-103 kilograms respectively. To achieve this comparatively more time is needed, which in turn demands additional feed expenditures.

The Food Program of the Ukrainian SSR in the Period to 1990 sets the goal of increasing the production of all types of feed in the republic by a factor of 1.3-1.4 during the current five-year plan. The measures elaborated in the UkSSR are to meet the needs of public livestock raising with regard to feed protein by means of expanding the area in pulse crops and other sources as well as by means of using them more efficiently.

The experience amassed in our republic attests to the great possibilities for raising the productivity of feed crops. Even under the unfavorable weather conditions of 1982 a number of oblasts, rayons and many enterprises achieved a large productivity in these. Thus, for example, in the enterprises of Cherkassy Oblast this indicator comprised 44.2 quintals of feed units per hectare sown in feed crops, of Kharkov Oblast--40.4 quintals, of Tarashchanskiy Rayon of Kiev Oblast--56.3 quintals, of Gorokhovskiy Rayon of Volyn Oblast--53 quintals, the Ukraina Kolkhoz of Novovorontsovskiy Rayon of Kherson Oblast--116.1 quintals and in the Ukraine Kolkhoz of Vinnitskiy Rayon of Vinnitsa Oblast--101.5 quintals of feed units.

Worthy of great attention is the experience of the Kolkhoz imeni Kirov of Kherson Oblast, which is directed by Hero of Socialist Labor D. K. Motornyy. In 1976 the specialized link of machine operators in this enterprise gathered 1,740 quintals of root crops from each hectare in feed beets, in 1981--2,535 quintals, in 1982--2,563 quintals and in dry 1983--1,938 quintals. In other words in 1981 and 1982 this crop enabled us to produce 380-390 quintals of feed units per hectare.

Large yields of feed beets are achieved by a number of enterprises in Nikolayev, Cherkassy, Kiev and other oblasts of the Ukrainian SSR whose specialists feel that in order to secure a high productivity in the dairy herd it is necessary to procure a minimum of 4-5 tons of root crops for winter.

Many years of experience in leading enterprises of our republic attest to the fact that one of the ways to solve the feed problem involves creating dependable (even for 1.5 year) reserves of feed resources. At the same time annual plans call for only insignificant emergency reserves of coarse and succulent feeds (on the order of 15-20 percent of need) as well as of concentrated feeds (up to 10 percent of need).

In addition to increasing the productivity of livestock and poultry, one of the main conditions securing the continued increase in production of animal products is constant concern for the reproduction of the herd, which to a great extent determines not only the level at which branch production increases but its profitability and its entire economy as well.

The leading kolkhozes and sovkhoses of the Ukraine are giving considerable attention to this important sector of work. For example, the kolkhozes and sovkhoses of Crimea Oblast, demonstrating constant concern for the development of the feed base in public livestock raising, produce 92-94 calves per each 100 cows, intensively utilize the maternal herd and achieve the largest milk yield in the republic's oblasts per cow--over 3,000 kilograms during each of the last 2 years.

However, in a number of enterprises and even in some oblasts of our republic things are not going well with regard to the reproduction of the herd and to increasing its productivity. A high level of barrenness in the maternal herd is tolerated, the output of calves remains low and as a result the cost of production output increases.

Considering the national economic significance of this problem, we should note that increasing the fertility of animals is one of the most important goals of science for the near future. Currently actual indicators for the reproduction of animals do not exceed 50 percent of existing potential. For example, the biological possibilities for progeny comprise two calves per pregnancy, but the actual birth rate fluctuates around 0.8. The possibilities for achieving growth per one pregnancy in sows (no fewer than 20) are utilized by only 40-45 percent. The indicator that has been achieved with regard to birth rate in sheep comprises about 20 percent of that that is biologically possible. Even when producing about 200 eggs per hen enterprises realize only 53-60 percent of its biological potential.

The continued development of livestock raising is tied in with raising the technical level of production and with the universal transition to electrical machine technology, which is capable of achieving its fluidity. The transition of this branch of agriculture to an industrial base requires an increase in the level of production specialization and concentration, which are important ways to raise the effectiveness of utilizing existing fixed production funds. It should be noted that in 1972-1982 this process grew noticeably stronger in our republic. Thus, for example, the proportion of cattle farms with herds numbering 3,000 head and more increased from 9 to 21 percent, including dairy farms with 1,000 cows and more--from 10 to 22 percent. In the enterprises of Dnepropetrovsk, Kiev and Voroshilovgrad oblasts the number of such dairy farms surpasses half.

There is no doubt that the creation in our republic of enterprises to produce livestock products on an industrial basis is a turnaround in the technology of one of the main branches of agriculture, since thanks to this we achieve significant improvements in the working conditions of agricultural workers and an increase in work productivity. At the same time the question of building a complex is frequently decided without a consideration of the

degree to which a herd of the proper quality, feed and highly-trained cadres are available. We are speaking of the fact that during the planning stages these questions are still not being dealt with the way they should be. As a result, many livestock raising complexes did not meet planned indicators.

Under conditions of production concentration and specialization it is very important to determine efficient sizes for livestock raising complexes as regards each specific case. The effectiveness of these enterprises is evaluated in different ways. Most designs for livestock farms exhibit a one-sided approach to this question, i.e. considering estimated costs per head of cattle or cattle place and the schedule needed to reimburse capital investments. There is no argument that the aforementioned indicators are very important, but there is not always a consideration of the necessity to build housing facilities, structures for cultural-everyday purposes, structures for environmental protection and so forth. If we consider these expenditures, the cost of erecting a complex of 1,600-2,000 cows (calculated on a per-cow basis), for example, will surpass the cost of an enterprise for 800 cows by 160-200 rubles, and the actual assimilation period will significantly exceed the planned period. For this reason, in the republic's general scheme for distributing livestock raising complexes it would be expedient to foresee the building and introduction into operation of the essential production objects and the creation of conditions for a more efficient utilization of existing lands and labor resources. With a consideration of this the aforementioned scheme will be supplemented with economic and social-economic bases.

At the contemporary stage of development in livestock raising great significance is attached to the renovation and expansion of existing production capacities, to equipping them with highly efficient machines and mechanisms and on this basis to introducing progressive production technology. There is no doubt that the creation of facilities requiring costly capital investments will be sufficiently justified only when possibilities for renovation are foreseen. A fact not always taken into account is that livestock facilities are utilized for over 50 years, whereas expensive equipment is used for only 4-5 years.

Here it is also important to take measures to make sure that the reequipping of livestock farms is not elemental in nature. In most cases this work is conducted without the corresponding planning and estimates and even in the face of the absence of sufficient quantities of needed materials and structural elements. Specialized building organizations hardly participate in this important matter, viewing it as petty and economically disadvantageous.

An improvement in the economic effectiveness of public livestock raising requires an improvement in cost accounting relations and adherence to contract discipline between branches of the agro-industrial complex. To a significant degree this relates to the organization of procurement and the shipment of farm products. To this day kolkhozes and sovkhoses use their own transportation, which is not always readied for this purpose, to deliver a significant portion of their livestock to the state. Frequently powerful trucks are driven significant distances to deliver 2-3 animals. Often such work is done by modern tractors. Enterprises experience great losses as a result of the added expenditure of material to reequip the means of transportation and of its inefficient use.



Experience attests to the fact that the most correct way to improve the use of automobile transport and to secure the timely shipment of livestock products is to organize centralized shipping. Thus, in 1982 the enterprises of Chernovitsy Oblast delivered 71 percent of total livestock delivered to meat-processing combines, Ivano-Frankovsk--59 percent, Kharkov--58 and Ternopol--57 percent. Specialized industrial vehicles were used to ship 55 percent of the milk procured by the state from the kolkhozes and sovkhoses of Ternopol Oblast, of Ivano-Frankovsk--48, of Chernovitsy--46 and Transcarpathian Oblast--40 percent. Thanks to this on the average in a number of oblasts in our republic the annual output per vehicle transporting livestock was 1,100-1,340 tons and per vehicle transporting milk--1,300-1,400 tons.

But unfortunately there are many hindrances in this important matter. Thus, partners in the agro-industrial complex do not always consider the interests of the suppliers of livestock products. For example, in Odessa Oblast during the last 8 years the number of milk-reception points decreased from 96 to 50 and because of this some enterprises are forced to ship their milk 35-40 kilometers to reach them. This type of situation has been observed in a number of other oblasts.

The complaints of kolkhoz and sovkhos directors are justified concerning the low level of use of cattle trucks and milk trucks given by them to industrial enterprises. Thus, in 1982 in the Sumy, Nikolayev, Vinnitsa and Zhitomir production associations of the meat and dairy industries only 670-720 tons of livestock were shipped by each cattle truck and milk truck, and in Odessa--526 tons of milk.

There is no doubt that today the coming together of the interests of procurement organs and the suppliers of livestock products and the sharp decrease in losses of products are being given priority. At the same time the material stimulation of workers in livestock-procurement organizations does not always depend on the volume of work fulfilled by them and the quality of this work.

The solution of great problems before the livestock farmers of our republic is not possible without the constant introduction into production practice of the achievements of scientific-technical progress. In recent years this work yielded perceptible results but there are many unsolved questions here too. Let us take, for example, the creation of feed shops. They are often built according to one's own ideas and equipped with an arbitrary collection of equipment. This does not always mean no significant expenditures--the consequence is an additional use of transport and loading vehicles and work force. The main thing is that the desired results are not achieved.

Scientific-research facilities are slow to deal with the problem of improving the design of machines, mechanisms and equipment for livestock farms as well as of increasing their dependability during operation, which results in long periods of idleness for the means of mechanization and has a negative effect on the economic status of kolkhozes and sovkhoses.

Recently, in connection with the extensive introduction of complex mechanization there has been a positive tendency to decrease labor expenditures per

unit production in the development of livestock raising. For example, in 1982 10.5 man-hours were expended for the production of 1 quintal of milk in the republic's kolkhozes, which is 22 percent less than in 1970; for the production of 1 quintal of weight gain in cattle--61.2 man-hours or 17 percent respectively; per quintal of weight gain in hogs--50 man-hours or 12 percent; and for 1,000 eggs--17.5 man-hours or 57 percent respectively. In sovkhoses labor expenditures for the production of 1 quintal of milk decreased by 15 percent during this period; weight gain in hogs--by 21 percent. For the production of each 1,000 eggs during the years of the past five-year plan alone labor expenditures decreased from 5.7 to 3.6 man-hours, or by 37 percent.

An analysis shows that labor expenditures are being decreased at the most accelerated pace in the production of poultry and pork products, where industrial technology of production is being introduced on a larger scale. In livestock raising and sheep raising industrialization is being introduced relatively more slowly.

In addition to this we have observed an increase in the cost of livestock production. This type of situation developed to a significant degree as the result of the saturation of livestock farms with various machines, mechanisms and equipment. In addition, in recent years the proportion of basic expenditures--for feed, amortization and ongoing repairs of livestock facilities--has increased within the structure of total costs of livestock products. On the other hand, this type of phenomenon is based on the insufficiently efficient use of material-technical resources, on increased prices for the means of production and increased taxes for production services rendered by various organizations as well as on a noticeable increase in wages to kolkhoz farmers and sovkhos workers.

In order to fulfill the objectives of raising the economic effectiveness of public production it is essential to more fully utilize the reserves existing in kolkhozes and sovkhoses for decreasing the cost of livestock production and for increasing the profitability of all branches. Long-term experience in a number of labor collectives attests to the availability of these reserves. For example, in the Order of Lenin Ploskovskiy Sovkhoz of Kiev Oblast high results are achieved each year as a result of a comprehensive approach toward solving these problems. Stable and high indicators of productivity in feed crops and in feed expenditures per cow, which comprised 70.5 quintals of feed units here in 1982, bring attention to themselves. In conjunction with extensive organizational work to improve selection and breeding work this has enabled farmers to increase the number of cows to 49 per 100 hectares of agricultural lands in the course of the last 8 years, and to increase the productivity of each cow to 5,644 kilograms of milk annually. In 1982 the profitability of milk production in the aforementioned enterprise equalled 40.7 percent.

Our goal is to make sure that the achievements of leaders be introduced more widely in many enterprises.

We know that in the matter of implementing the USSR Food Program there is great significance in implementing a complex of measures not only to increase the production of food products and to facilitate a proportional and balanced development of the branches within the agro-industrial complex but also to improve administration, economic stimulation and planning.

An important document that facilitates improvements in the system of planning is the 1980 resolution of the CPSU Central Committee and the USSR Council of Ministers, "On Improving Planning and the Economic Stimulation of Production and Procurement of Agricultural Products." It focuses special attention on plan balance. This is very important in connection with the fact that in agricultural production, which is the main link in the agro-industrial complex, there could be negative consequences without precise balancing.

Soviets of agro-industrial associations of rayons and oblasts will be called upon to do extensive work to deal with all the questions relating to the development of the agro-industrial complex and especially to the development of its material-technical base and to improving economic interrelations between branches belong to the complex by means of strengthening mutual interests. Special attention will have to be focused on improving the economies of enterprises and their partners.

Rayon agro-industrial associations have been given complete independence in developing plans. At the same time this requires an increased role for the rayon planning link, which has the tasks of planning and organizing controls for the course of fulfillment of planning elaborations as well as of constantly seeking out economic reserves.

Under these conditions the role of economists increases immeasurably as organizers of the effective utilization of all existing resources of the agro-industrial complex. The economic results of the work of enterprises belonging to the agro-industrial complex are determined by the plan. It is understandable that planning quality acquires special significance at all levels of operation of the economic service. Even minor errors in this matter will have a negative effect on the general results of work and on the interest of many workers in the results of this work.

All of this attests to the necessity to constantly improve planning and economic work. After all, each plan--annual, five-year or long-term--is the result of the creative search of specialists and directors of enterprises, of a thorough study of every planning object, of the multi-faceted use of existing reserves and possibilities for increasing production intensification in all branches of agriculture, including livestock raising.

Since 1981 enterprises have been provided with a single state plan for the sale of livestock products. Production volume, the size of herds of livestock and poultry and productivity indicators are determined locally. It is very important that now plans assigned to kolkhozes and sovkhozes are to be strengthened with the corresponding supply of material, technical and financial resources. Enterprises receive the basic data on the volume of procurement of livestock products practically 1 month before the end of the year, which

enables them to summarize the work results for the year, find production reserves and consider them in making up a plan and to also thoroughly study the possibilities of each production subdivision and establish objective assignments for each.

There is no doubt that a plan that is worked out with quality determines success to a considerable degree. This is why already during the planning stage all circumstances must be taken into account and all necessary measures guaranteeing the achievement of the stated objectives should be implemented. As one of the numerous examples it would be expedient to examine the following: the assignments related to the production and procurement of livestock products called for the introduction into operation of new objects, but it turned out that the schedule for doing this was unrealistic and that in turn this would complicate the achievement of assignments. A similar situation is developing in the case of tolerating errors in the development of feed production and in the fulfillment of the indicated measures to reproduce the herd.

Livestock brigades and farms are given production quotas on the basis of the annual plan. However, in the course of the year they are corrected in some places, thus losing their force for all practical purposes. In addition, sometimes controls over their fulfillment are superficial. Thus, in many cases attention is given only to the output of livestock products while costs, labor productivity within the branch and economizing on labor and material resources are not considered. This type of situation can be explained to a large extent by a low level of economic education of directors of production subdivisions in a number of enterprises on livestock farms or complexes or sometimes by formal and superficial attitude to this work.

Under contemporary conditions the goal of successfully dealing with problems standing before livestock farmers of our republic requires precise work to widely introduce and constantly improve economic analysis, which represents a special form of managing activities related to securing increased livestock production output and an increased effectiveness of the branch. In emphasizing the relationship of such an analysis to management, V. I. Lenin wrote, "The business-like economist studies facts, figures and data instead of theses; he analyzes our own practical experience and can tell us where the errors are and where to make the corrections. On the basis of this type of study the business-like administrator will propose or will implement changes in personnel or accounts; a restructuring of the apparatus and so forth."<sup>2</sup>

At the present time in kolkhozes, sovkhoses and inter-farm enterprises this important work is being done by bureaus of economic analysis created there, which as a rule are headed by economists. Participating in their work are specialists and production leaders. At the center of their attention are questions related to determining specific ways to decrease production expenditures and the cost of livestock production as well as to the elaboration of proposals to raise production effectiveness within the branch on the

<sup>2</sup> Lenin, V. I. "Poln. sobr. soch." [Collected Works], Vol 42, p 345.

basis of a thorough economic analysis. The experience of leading enterprises in the republic attests to the fact that it would be expedient to hold meetings of these bureaus no less frequently than once per month, and if questions arise that require immediate solutions additional meetings should be organized (frequently with a trip to a specific production object). This enables us to examine all aspects of the course of fulfillment of cost accounting tasks and to control the adherence to the established limit of material and labor resources, labor and technological discipline and the fulfillment of tasks related to the growth of livestock production volume, to improvements in quality and so forth.

Deserving of widespread dissemination is the experience of directors and specialists of many enterprises regarding the discussion of plans in general meetings of farm workers, at which criticisms are heard and practical proposals are made to improve the use of the possibilities of improved planning, its foundation and relationship to specific circumstances.

It should be noted that in many enterprises, as a result of precisely organized planning-economic work, the economic analysis has become one of the most important forms of controlling the activities of production subdivisions and all members of labor collectives of livestock farmers. As a result existing possibilities for raising the level of management with the goal of achieving high results with minimal expenditures are utilized in a qualified manner. Such leading enterprises include the Kolkhoz imeni 22 S'yezd KPSS of Bershadskiy Rayon, Vinnitsa Oblast, the Progress Kolkhoz of Krinichanskiy Rayon of Dnepropetrovsk Oblast, the 40 Let Oktyabrya Kolkhoz of Vasil'skovskiy Rayon in Kiev Oblast, the Druzhba Narodov Kolkhoz of Krasnogvardeyskiy Rayon in Crimea Oblast and the Ukraina Kolkhoz of Chernobayevskiy Rayon in Cherkassy Oblast and others.

An analysis shows that in highly profitable enterprises labor and material expenditures are closely related on the basis of cost accounting. Here each farm, brigade and link is given production assignments, the wage fund is calculated and the required material-technical supplies are foreseen. This is done formally in many low-profit enterprises, but labor is reimbursed according to a piecework system which means that norms and prices do not depend on the final results of their labor; in other words false cost accounting is practiced here.

The achievement of the indicated final results in the development of livestock raising depends on the precision of planning not only of its ties with other branches of the agro-industrial complex but also of ties directly within the enterprise. For example, in elaborating a feed balance usually full supplies of livestock and poultry with coarse, succulent and other types of feeds are foreseen, but if their allocation is not guaranteed this will result in unbalanced rations for animals, an underproduction of livestock products and an overconsumption of feed. In most cases this is a consequence of planning unjustifiably high indicators for the productivity of feed and grain-forage crops or of low norms for feed consumption per unit of livestock product and the incorrect determination of emergency funds (because of these and other reasons deficits reach 20-25 percent of needs here).

Also deserving of attention is the elaboration and introduction of a system of economic mutual relations between the workers of agriculture and livestock raising which will increase the responsibility of both subdivisions for the final results of their work. At the present time incentive measures in these subdivisions are different. Evidently, a portion of the wages of feed procurers should depend on the production results achieved by farms. In this scientific-research institutions must present their weighty word after elaborating the corresponding scientifically-based recommendations.

The role of agricultural specialists, who are called upon to be the initiators of all that is new and progressive, is especially great as concerns the successful solution of urgent problems of developing livestock raising. The growth of their skill is attested to in part by the fact that in recent years a large number of zootechnologists of kolkhozes and sovkhoses, directors of farms and brigades and livestock workers have been honored with high government awards and that their experience has been recommended for extensive introduction.

At the same time there are still cases in which directors and specialists of lagging enterprises blame objective factors. There is no doubt that they must be looked at, but if under the same natural and economic conditions enterprises achieve different results this means that the main role was played by the skill to organize work in the necessary way.

The fulfillment of the decisions of the May (1982) Plenum of the CPSU Central Committee, especially as regards rendering aid to weak kolkhozes and sovkhoses, is the basis for the need to increase work to strengthen the economies of enterprises. Unfortunately, the cost and profitability of producing meat, milk, eggs and other livestock products are not always at the center of attention of economic work and the results of this work are examined on an irregular basis. Sometimes zootechnologists and the directors of subdivisions of livestock raising are versed in economics with insufficient thoroughness.

The specialists of the agricultural branch under examination have been given a very important task--to lead the struggle for technical progress, to achieve great production results with the smallest possible expenditures, to mobilize all reserves for the full-value feeding of animals that will secure an improvement in their productivity, to improve breeding work and herd reproduction, to achieve total preservation of livestock progeny and to fulfill the plans for the sale of livestock products to the state.

Thus, in order to successfully fulfill the goals established by our party with regard to increasing livestock production output more inexpensively and with better quality it is essential to more effectively utilize feed and the herd by means of constant and methodological work in every rayon and enterprise to seek out possibilities for improving the technology of production for livestock products and by means of introducing the achievements of science and progressive experience. All of this will allow us to successfully fulfill the goals of our country's Food Program.

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NURIYEV ASSESSES APK PROGRESS, PROBLEMS

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[Article by Z. Nuriyev, deputy chairman of the USSR Council of Ministers and chairman of the Committee on Questions Related to the Agro-Industrial Complex of the Presidium of the USSR Council of Ministers: "The Agro-Industrial Complex: Results and Immediate Goals"]

[Text] The policies of the Communist Party of the Soviet Union are oriented toward the consistent implementation of a strategic party course to improve the material well-being of the Soviet people by means of the overall intensification and increase in production forces in all branches of the national economy.

This was emphasized once again at the February 1984 plenum of the party's central committee and in the speech there by the General Secretary of the CPSU Central Committee, Konstantin Ustinovich Chernenko.

Among the measures to strengthen the country's economy, the communist party and the Soviet government attach great importance to accelerating the development of agriculture and all branches of the agro-industrial complex. This became possible as a result of the creation in the country of a powerful economic and scientific-technical potential, which recently enabled us to considerably alter proportions in the use of national income in favor of the branches of the agro-industrial complex.

I

The Soviet agro-industrial complex is forming in the direction of accelerated development of the branches of industry that produce the means of production, especially agriculture, as well as of branches involved in the procurement, storage and processing of agricultural products and raw materials. For their development there has been a persistent increase in the share of capital investments in their total volume within the national economy. During the Eighth to 10th five-year plans about 500 billion rubles of capital investments were directed at expanding and revitalizing the material-technical base of the basic branches of the APK [Agro-industrial complex]. During the current five-year plan 233 billion rubles, or about one-third of the capital investments in the national economy, have been earmarked for this. In accordance with the USSR Food Program during the 12th Five-Year Plan 33-35 percent of all capital investments in the country will be used for these purposes.

The majority of investments are directed at improving the production forces of the central sphere of the APK--agriculture. For the entire complex of operations these comprised 48.2 billion rubles, or 20 percent of the total volume of investments in the national economy, during the Seventh Five-Year Plan, during the Eighth--81.5 billion rubles or 23 percent, in the Ninth--130.5 billion or 26 percent, in the 10th--171 billion or 27 percent, in the current five-year plan--190 billion rubles or 27.3 percent and in the 12th Five-Year Plan--27-28 percent of the state's capital expenditures.

In 1966-1980 over 110 billion rubles of capital investments were directed only toward production needs within the sphere occupied in producing the means of production for the APK. Capital-labor ratio almost tripled here. For example, during this period there was a considerable expansion of production capacities within the system of the USSR Ministry of Tractor and Agricultural Machine Building. The output of tractors increased from 355,000 with a total engine capacity of 21 million horsepower in 1965 to 564,000 with a total engine capacity of 49.3 million horsepower in 1983. The production of agricultural machines for farming (expressed as cost) increased from 1.3 billion to 3.4 billion rubles. In essence, a new large and specialized branch was created for the production of machines and equipment for livestock raising and feed production. The output of such technology increased from 0.35 billion to 2.46 billion rubles. This expanded and strengthened interbranch ties between machine builders and agriculture and contributed to the consolidation of the material-technical base of kolkhozes and sovkhozes. During the aforementioned period there was an increase in the volume of production of technological equipment and spare parts for the branches of the food industry by a factor of 2.8.

A great deal has also been done to increase capacities in the chemical industry, which enabled us to significantly increase the production of mineral fertilizer: 7.4 million tons in 1965, 13.1 million in 1970, 22 million in 1975, 24.8 million in 1980 and 29.7 million tons in 1983 (calculated on the basis of 100 percent nutritive substance). There has been an increase in the output of means for plant protection, of synthetic coatings, feed supplements and other chemical products needed by the village.

During the Eighth-10th five-year plans essentially there was a renewed development of capacities in village building organizations--a most important integral part of the agro-industrial complex. Over 21 billion rubles of state and kolkhoz resources were utilized to develop their production base. This enabled the USSR Agricultural Ministry and inter-kolkhoz building organizations to increase the volume of building-installation work to 11 billion rubles per year.

The capacities of water management organizations increased rapidly, enabling us to increase the area of irrigated lands to 18.3 million hectares and of drained lands to 13.4 million hectares. The mixed-feed industry has improved significantly. The production of mixed feed in state enterprises and in kolkhozes and sovkhozes quadrupled. During the last decade a modern microbiological industry was developed, enabling us to increase the output of feed protein to 1.3 million tons of marketable product per year. The material-



technical base of USSR Goskomsel'khoztekhnika [State Committee of the Agricultural Equipment Association] has been strengthened considerably. In comparison with 1965 levels its fixed production capital has more than tripled.

During the Eighth-10th five-year plans about 70 billion rubles of capital investments were directed at the third sphere of the APK, which as we know is involved in the procurement, storage and processing of agricultural products. This enabled us to introduce new elevators with a total capacity of 44 million tons at one time, grain storage facilities for 110 million tons and storage areas for vegetables, fruit and potatoes, refrigerators and capacities for the sugar, oil and fat, flour and groats, candy, meat, dairy and other sub-branches of the food industry.

The scale of the current level of development of the agro-industrial complex is attested to by the fact that the cost of fixed capital exceeds 400 billion rubles and comprises over 30 percent of all production funds within the national economy. Forty percent of workers are occupied in the APK. The final products of this complex yield about 75 percent commodity turnover.

Commodity-financial relations between agriculture and branches of the APK and other spheres of the national economy have improved consistently. Profits in enterprises from the sale of agricultural products increased from 28.7 billion rubles in 1965 to 82.8 billion rubles in 1982. During this same time there was a significant increase the kolkhoz and sovkhos expenditures for the purchase of raw materials, materials and equipment produced in industry. A strengthening of the economic potential of the APK enabled us to increase the average annual production of agricultural products from 82.8 billion rubles during the Seventh Five-Year Plan to 123.9 billion rubles during the 10th.

A considerable amount has been done. However, the current status of the food matter in the country still does not meet the growing need for a number of food products. This results primarily from the increasing growth of monetary income of the population and stability in retail prices for food products. In connection with this the buying capability of the population surpassed the growth in agricultural production many years. This is also due to the decrease in the number of people working directly in the agrarian sector of the economy and to the rapid growth of urban populations. Another influence is the slow growth in the effectiveness of agriculture and the incomplete supply of the agro-industrial complex with material-technical resources.

With consideration of all these factors the USSR Food Program for the period to the year 1990 was developed. Without exaggerating we can say that the entire country is now working to implement it.

## II

After the November 1982 Plenum of the CPSU Central Committee the organization of work to implement the Food Program was placed on a higher level. The Politburo of the CPSU Central Committee and the USSR Council of Ministers make a systematic, thorough and comprehensive examination of many questions

related to increasing agricultural production output and to improving the use of everything that the branches of the APK have at their disposal. Specific measures are being taken to improve the management, organization and reimbursement of labor, to raise responsibility and discipline and to secure increased effectiveness in the work of kolkhozes, sovkhozes, enterprises and organizations of the agro-industrial complex.

In connection with the Food Program there has been a restructuring of management. This was necessary because in recent years inter-branch ties have become more complex in connection with the growth in the scale of production and with an intensification of processes related to the division of labor.

In the center, in republics, oblasts and rayons new branches and organizations have developed to service kolkhozes and sovkhozes. There has been a development of a network of departmental enterprises and organizations to supply the village with material-technical resources, to repair and service technology, to apply fertilizer, to perform reclamation operations, to build and to ship, procure, store and process products. This has complicated the work of directors of kolkhozes, sovkhozes and agricultural organs. Many of them were forced to have business dealings with two to three dozen various organizations.

Within agriculture itself there have arisen all types of narrowly specialized enterprises and branch associations with an inter-rayon, oblast, republic or even union subordination. All of this has resulted in a disconnectedness in management. It turned out that in addition to existing territorial administrative organs numerous branch administrative organs developed and were joined by a large number of enterprises. Departmental administrative organs developed for enterprises and organizations servicing kolkhozes and sovkhozes. Various administrative organs taking inter-enterprise forms also arose.

The new intra-branch specialized and departmental administrative structures were superimposed on the agricultural administrative system that existed until the 1970's, which resulted in a complication of production interrelations. The creation of numerous organs of agricultural administration and of branches related to it gave rise to a duplication of operations, strengthened the administrative method of leadership, resulted in an unjustified growth in the personnel within the administrative apparatus and the diversion of a significant number of trained specialists directly from kolkhozes and sovkhozes and in the final analysis led to decreased administrative effectiveness.

This is why in early 1983 over 3,100 rayon agro-industrial associations were created to include 52,000 kolkhozes and state farms, about 7,500 industrial enterprises, almost 23,000 service organizations and over 17,000 other enterprises and organizations with a total of over 31 million workers. In autonomous republics, krais and oblasts there are 157 agro-industrial associations, which include the corresponding organizations of the agro-industrial complex, enterprises subordinate to them and rayon associations. At the same time that new administrative organs are formed, trusts, industries and other parallel or duplicating links are eliminated. As a result over 3,200 trusts, associations and other administrative organs have been eliminated and there has been

a considerable curtailment of the size of the administrative apparatus and of expenditures for its upkeep. In the center and in union republics committees on questions related to the agro-industrial complex have been created within the presidiums of the councils of ministers.

The goals of restructuring administration involved securing the coordination of activities of enterprises and branches belonging to the APK and raising the economic independence and initiative of kolkhozes and sovkhoses as its main link.

New organs are still amassing experience. But it can already be said that most of them have focused their activities on solving urgent problems. We are speaking about securing the more effective use of production funds and financial, material and labor resources existing in associations. There has been a noticeable improvement in coordination with regard to the elaboration of plans and of making effective decisions on inter-branch problems.

Locally more attention is being paid to improving production services and material-technical supplies for kolkhozes and sovkhoses. More is being done to develop direct ties between enterprises and industrial and trade enterprises, to expand the network of procurement and processing points, to receive products directly in kolkhozes and sovkhoses and to ship them out using vehicles belonging to the procurer. As never before, great importance is being attached to solving the problems of social development of the village.

In this regard consistent work is being done by the Committee on Questions Related to the Agro-Industrial Complex of the Presidium of the Belorussian SSR Council of Ministers, by Moscow, Kuybyshev, Ulyanovsk, Saratov, Dnepropetrovsk, Karaganda and Kustanay oblast agro-industrial associations, by rayons--Arzamasskiy (Gorkiy Oblast), Rakityanskiy (Belgorod Oblast), Kromskiy (Orlov Oblast), Karlovskiy (Poltava Oblast) and Yefremovskiy (Tula Oblast) and by many other republic, oblast and rayon organs.

Thus, in accordance with the decisions of the Council of the Yershovskoye RAPO of Saratov Oblast, at the present time production capacities of existing meat combines are being increased to 10 tons of meat daily using the resources of rayon enterprises. This allows rayon kolkhozes and sovkhoses to practically eliminate losses in delivering livestock to the city of Engel's at a distance of 180-260 kilometers and to avoid production losses in the process. One kolkhoz alone -- imeni 18 Parts'yezd--lost 22,400 rubles in livestock deliveries during 1982 and on the whole the rayon's kolkhozes and sovkhoses lost no fewer than 150,000 rubles and 1,240 quintals of meat. On the initiative of the Vileyskoye RAPO of Minsk Oblast special mixed feed vans were accepted by the rayon agricultural equipment association from enterprises. This enabled workers to deliver mixed feed to farms on schedule, to increase labor productivity in auto transport by a factor of 1.5 and to curtail the expenditure of fuel. In the Yefremovskoye RAPO of Tula Oblast order was brought to the repair of technology and to securing spare parts; the use of the drying industry and loading-unloading technology was well thought out for the period of grain procurement. Through the joint efforts of rayon enterprises development began on a shop to prepare whole milk substitutes, on inter-

enterprise points for the storage of fertilizer and on preventative medical facilities in the village.

The councils of many agro-industrial associations have implemented measures to improve production and economic interrelations of kolkhozes and sovkhozes with service and procurement enterprises and organizations. With this goal in mind there was a reexamination of the volume of work and services provided by partners for enterprises and of rates and costs of services provided to enterprises. Associations have or are creating centralized funds; conditions for rewarding leading workers and specialists and organizations of Sel'khoztekhnika, Sel'khozkhimiya [Agricultural Chemical Association] and Minvodkhoz [Ministry of Water Resources] for the end results have been worked out and confirmed.

In accordance with resolutions that have been passed, agro-industrial associations have been given many rights. However, some associations have not yet, as we say, found themselves. Not everywhere have associations begun their work in the spirit of the requirements of the Politburo of the CPSU Central Committee. Some of them did not understand with sufficient clarity the essence of the restructuring that is taking place or the rights and obligations of new administrative organs. The work of some councils does not yet exhibit the necessary initiative and business-like features; passivity and the expectation of orders from above are demonstrated. Sometimes as a result of the lack of firmness of RAPO councils some administrators of enterprises doggedly remain in the camp of dependence, not taking it upon themselves to think out how best to utilize internal reserves and possibilities, and count on supplementary state aid as before.

A number of councils of agro-industrial associations copy the work of past agricultural administrations, involving themselves in routine business and meddling in problems outside their competency. For example, in the rayons of Yaroslav Oblast the style, nature and methods of work have remained as they were 2-3 years ago. As before, constant interference in the affairs of kolkhozes and sovkhozes is tolerated and few measures are being implemented to coordinate the activities of enterprises and organizations belonging to the association, with the exception of listening to some directors at council meetings. Here, subdivisions of a technological profile are prevalent within the structure of the administrative apparatus. The existing planning-economic divisions with 3-4 persons are not capable of implementing work related to the elaboration of proposals to coordinate the activities of enterprises and organizations belonging to the RAPO.

In a number of oblasts and rayons directors and specialists of agro-industrial associations have not assimilated newly passed normative documents with sufficient thoroughness and do not clearly understand their rights and obligations. In Ulyanovsk Oblast departments of inter-branch communications have not been created in a single one of 20 rayon agricultural administrations. These shortcomings are characteristic of many oblasts in the RSFSR and other union republics. In most rayon agro-industrial enterprises of Ryazan Oblast the work plans for enterprises and organizations servicing kolkhozes and sovkhozes were not examined and corrected. The council of the Shilovskoye RAPO of this oblast has examined no questions other than those involving the activities of agricultural enterprises since its inception.

Selecting the true direction, really assimilating a business-like type of management, decisively eliminating paper pushing, instability and excessive surveillance of enterprises and avoiding inertia and old habits--these are priority goals. The councils of associations are collective and democratic organs. The directors of enterprises, farms and rayon and oblast organizations have been recruited for administering the agro-industrial complex. This is why we must decisively improve planning and the economic mechanism of inter-relations, eliminate bottlenecks and disproportionalities and more effectively utilize the existing material-technical base and the resources allocated by the state.

### III

In the time that has passed since the November 1982 Plenum of the CPSU Central Committee the workers of the agro-industrial complex and the new administrative organs, under the leadership of party organizations, has done considerable work to increase the production of food products and to increase the effectiveness of all spheres of the APK. A satisfactory harvest of grain crops was cultivated and collected. It was particularly weighty in the Transvolga, the TsChO [Central Chernozem Oblast], the Non-Chernozem Zone, in a number of Ural oblasts, in the northern and central oblasts of the Ukraine, in Belorussia, in some regions of Kazakhstan, in the republics of Central Asia, in Latvia and Azerbaijan. Most union republics and almost 64 krays and oblasts of the RSFSR, the Ukraine and Kazakhstan supplied the state with grain at a level with or greater than that planned. In other words, more grain was produced and procured than during any year of the last five.

In addition to measures to increase the gross yield of grain, extensive work has begun in the country to utilize it efficiently. During the last two five-year plans its consumption by livestock has grown sharply. Here of the total quantity of concentrates over half are fed to cattle and sheep. With the goal of decreasing this a policy has been put forth to increase the production and improve the quality of coarse, succulent and pasture feeds. In 1983 as compared with 1981 and 1982 it was possible to procure hay, haylage, silage and root crops in a quantity that was correspondingly greater by 24 million and 9 million tons of feed units.

Beet farmers have secured a considerable growth in the production and procurement of the sweet root crop. Good results have been achieved on the beet raising plantations of many oblasts in the Ukraine, the TsChO, the Transvolga and Northern Kazakhstan. In the country as a whole state plans for the procurement of potatoes and vegetables have been overfulfilled. More fruit and berries were procured than in 1982.

Last year was not one of the easy ones for cotton farmers. But thanks to their steadfast and coordinated labor practically a planned harvest of cotton raw materials was cultivated and collected.

The workers of livestock raising farms worked selflessly. During the past year the quantity of all types of livestock and fowl increased and there was a significant increase in the productivity of livestock raising. This enabled

farmers to considerably increase the production of meat, milk, eggs and wool. The procurement of milk, livestock and fowl increased by 9 percent in comparison with 1982, of eggs and wool--by 4 percent. The largest absolute increase in the production and procurement of milk in the last 10 years was achieved. In 1983 gross agricultural production output comprised 134 billion rubles, which is 5.7 billion rubles more than the harvest itself for 1978. The entire increase in production was secured by means of an increase in labor productivity.

The monetary income of kolkhozes and sovkhoses has increased as a result of the increase in procurement prices as of 1 January of last year, as a result of the introduction of supplements to them for unprofitable and low-profit enterprises and also as a result of the growth of sales volumes for agricultural products. In comparison with 1982 levels profits in enterprises increased by about 20 billion rubles. This had a positive effect on the economies of enterprises. According to operations data, kolkhozes and sovkhoses received about 17 billion rubles in profits. Here the level of profitability for producing farming and livestock products equalled 17-18 percent as compared with 1 percent in 1982.

The program of capital building, land reclamation and the chemization and mechanization of agriculture was successfully fulfilled. A great deal has also been done with regard to the social development of the village. A rapid pace was achieved in the building of housing, educational, cultural and health facilities and children's preschool facilities and in the installation of new village electrical and gas lines and building of roads.

There was more synchrony in the work of kolkhozes and sovkhoses with their partners within the agro-industrial complex--machine builders, chemists, organizations of Goskomsel'khoztekhnika, Minvodka, Minsel'stroy [Ministry of rural construction], mezhkolkhozstroy [Inter-kolkhoz building association] and of the mixed fodder and microbiological industries and procurers and processors of agricultural products and raw materials. For example, the organizations of Minvodka have assimilated 7.2 billion rubles of capital investments, 677,000 hectares of irrigated and 706,000 hectares of drained lands have been introduced and qualitative improvements of existing irrigation systems were made on 1.07 million hectares.

The associations and enterprises of Minpishcheprom [Ministry of the Food Industry] fulfilled their sales quota by 101 percent during the middle year of the five-year plan. The value of the total products sold equalled 50.2 billion rubles, or 2.3 billion rubles (4.3 percent) more than 1982 levels. In 3 years of the five-year plan labor productivity here increased by 12.1 percent as compared with the planned 10.8 percent. Almost 97 percent of the growth in production output was the result of increased labor productivity.

Many sugar plants have prepared successfully for the beet processing season; in 1983 work proceeded with a high utilization of capacities. Thus, all plants of the Northern Caucasus Association overfulfilled their plans for the daily processing of beets and of these the Gul'kevichskiy, Tbilissi, Ust'-Labinskii and Vyselkovskiy plants worked consistently with a 100 percent

utilization of capacities. Highly productive work was also done by the sugar plants of the Vinnitsa Agro-Industrial Association. Among them the Gonorovskiy and Il'inetskiy utilized their capacities by 100 percent and Pogrebishchenskiy, Brodskiy, Krasnoselkovskiy and Kirsanovskiy--by 97 percent. It can be said that the work of all collectives of sugar plants and beet sowing enterprises in the Ukrainian SSR related to harvesting, shipping and processing sugar beets from the 1983 harvest is an example of coordinated work among all members of the APK.

As a rule the harvesting of beets on beet plantations was strictly related to the schedule for shipments to sugar plants; the beets that had been dug out remained in the fields no longer than 1-2 days. They were shipped for processing on schedule or stored in clamps, which facilitated processing without losses and high economic indicators.

Moscow candy factories--Krasnyy Oktyabr', Bol'shevik and imeni Babayev, the enterprises of the Leningrad, Gorkiy and Lvov associations of the candy industry, the Kuybyshev Chocolate Factory, the Dnepropetrovsk Candy Factory and others are working with stability, a high degree of use of capacities and with good technical-economic indicators.

There has been some improvement in the status of the fruit and vegetable industry in the country. The procurement, storage and processing of potatoes, vegetables and fruit proceeded more efficiently. In 1983, 9,030 mub [Millions of standard cans] of fruits and vegetables were produced, which is 4 percent more than in 1982. The output of snack tinned goods, which are in greater demand, increased by 10 percent, of stewed fruit--by 20 and of jam--by 8 percent. Good results were achieved by the collective of the Order of Lenin Crimean Combine of Krasnodar Kray, which by using utilizing production reserves increased the output of canned goods by 10 percent, decreased the cost of production by 2.5 percent and increased labor productivity by 9.7 percent.

The enterprises of the meat and dairy industries also overfulfilled established quotas related to production output. In comparison to the goal of 36.3 billion rubles, commodity production equalled 37.7 billion rubles, which is 4 percent greater than the plan and 7.7 percent greater than 1982 levels. Enterprises fulfilled goals involving economizing on fuel and energy resources, decreasing the cost of production and increasing labor productivity.

The flour-groats (101 percent) and mixed feed (102 percent) branches of industry dealt successfully with annual programs. In comparison with 1982 the cost of production decreased by 23 million rubles, including as a result of economizing on raw materials--by 11 million and on fuel and electrical energy--by 2 million rubles. Goals related to the growth of labor productivity have been overfulfilled.

We must give the workers of the ministry of the fish industry their due. With a plan of 9.1 billion rubles they produced products worth 9.5 billion rubles. There was an overfulfillment of the task of increasing labor productivity. For the 66th anniversary of October 116 crews of fishing vessels fulfilled their plans for the 11th Five-Year Plan. High indicators in socialist competition were achieved by the collectives of 2,000 crews of ships, 2,300 brigades, shops and sections and 210 enterprises and fishermen's kolkhozes.

In this way, by steadfastly following the directives of the Politburo of the CPSU Central Committee the workers of fields and farms and of the entire food industry, have made considerable efforts to improve the supply of meat, milk, fish, fruit, vegetables, potatoes, groats, fats and other food products for the population. A primary role in this was played by the communist party's consistent implementation of measures to strengthen the APK and to strengthen discipline, organization and responsibility in various links of our economy.

#### IV

Not being satisfied with what has been done and achieved but moving forward without fail to achieve more--this law of V. I. Lenin is a guiding principle to action for our party.

This year field and farm workers have been given the task of producing agricultural products worth 140.4 billion rubles, increasing it by 4.8 percent. Labor productivity in the public sector of production must grow by 8.5 percent.

Capital investments for the development of agriculture in all areas of work will comprise about 40 billion rubles. Kolkhozes and sovkhoses will receive 23.3 million tons (converted to 100 percent nutritive substance) of mineral fertilizer and 575 tons of standard units of chemicals for plant protection. The village will be supplied with technology, building materials, fuel and energy resources and other material resources according to levels of assignments for the five-year plan.

At the present time kolkhozes and sovkhoses have a powerful production potential. Fixed production capital for agriculture have surpassed 260 billion rubles, energy capacities--700 million horsepower. In early 1984 agriculture had 2.72 million tractors, 1.75 million trucks, 810,000 grain harvesting combines, 73,000 potato harvesting combines, 58,000 beet harvesting combines, 44,000 corn harvesting combines, 670,000 tractor mowers, 260,000 silage harvesting combines, over 150,000 irrigation and sprinkling machines and a great deal of other technology. Twenty six million average annual workers are involved in agriculture.

In order to secure the fulfillment of state plans related to agricultural production output we must firstly better utilize everything available to kolkhozes and sovkhoses and their APK partners. This requires that agro-industrial associations, kolkhozes, sovkhoses, procurement and processing organizations and enterprises and organizations servicing the village implement an entire complex of effective measures to improve the use of land and all production funds, especially their active portion--technology and equipment, material and financial resources, and to further raise the level of organization and labor activeness.

It is essential to set a course for the universal introduction of scientifically-based zonal systems of agriculture, for improving the structure of sowing areas and the structure of livestock management and for seriously improving breeding and especially seed farming. In other words, the most serious attention should be focused on the qualitative aspect and on all means of intensifying production and securing a growth in productivity on fields and farms.



It should be stated directly that we still have more unused reserves. We can and must utilize technology better. To do this it must be repaired in good time, its dependability must be secured, idleness must be curtailed and the shift and seasonal output of each machine must be increased. In many rayons and enterprises the return on mineral fertilizers is still low and losses of mineral fertilizer have not been eliminated. Soyuzsel'khozkhimiya, together with kolkhozes and sovkhozes, must correct the situation quickly. Only by means of a carefully thought-out approach will it be possible to secure an improvement in the effectiveness of chemization. Here we must more extensively introduce local methods for applying fertilizer, increase the delivery of organic fertilizer to fields yearly and skilfully protect fields from pests and diseases.

This year we must take a big step away from experimental-production use of industrial technology toward its large-scale introduction on kolkhoz and sovkhoz fields. The period for research and testing is over. The time has come for a mass transition to progressive technology in cultivating practically all agricultural crops.

In accordance with the directives of the Politburo of the CPSU Central Committee, this year effective measures must be taken to raise the return on reclaimed lands. It is essential to do away with the circumstance that each year a portion of irrigated or drained lands is not used for crops due to one reason or another, that hundreds of thousands of hectares of irrigated lands are not watered and that on many improved land areas kolkhozes and sovkhozes collect small harvests. Minvodkhoz, together with Minsel'khoz and local economic organs, must fully secure the practical implementation of measures approved by the Committee on Questions Related to the APK of the Presidium of the USSR Council of Ministers. They must be oriented toward significantly raising the effectiveness of utilizing irrigated and drained lands.

There are also great tasks before livestock farmers. The plan foresees the achievement of considerable growth in the production of meat, milk, eggs and wool. The situation involving feed enables enterprises of all union republics to conclude the overwintering of livestock comparatively well, to improve the reproduction and preservation of the herd and to secure further growth in meat and dairy productivity in livestock raising. Farms make up the primary work sector in the village. Here everything is important--delivering and preparing feed on schedule, securing the operation of all machines and mechanisms and fulfilling the entire volume of work accurately and with a consideration of technological requirements. Here it is especially important to strengthen our concern for people and to provide the appropriate conditions for their highly efficient labor and active and interesting rest.

Plan goals for procurement and processing branches of the APK arise from the indicated volume of procurement of agricultural products and raw materials. This, as we have already noted, is quite large. It requires a careful preparation of storage facilities, dryers, machines for cleaning seed and raw materials and of enterprises of the sugar, oil and fat, canning, meat and dairy industries and other branches of the food industry. As in agriculture,

new capacities must be introduced on schedule and equipment in old facilities must be modernized.

The most important direction in the organizational work of soviets of agro-industrial associations and of directors of enterprises and organizations in the food industry involves securing more shift work in enterprises, improving the use of equipment and securing a more economic use of raw materials and energy resources.

As of 1 January of the current year an economic experiment has been conducted within the system of the agro-industrial complex in the Ukrainian SSR Minpishcheprom regarding expanding the rights of production associations and enterprises in planning and economic activities and strengthening their responsibility for work results. Some proposals of the economic experiment were put into effect during the fourth quarter of last year on the enterprises of the sugar, candy and macaroni industries and the food industry having a local subordination.

Corresponding preparatory work was done in order to successfully conduct the experiment. Normative decrees and methodological instructions have been developed and confirmed; plan indicators and standards for 1984 have been brought to the attention of all enterprises and production associations in a timely manner. Plans for production volume, for obtaining profits, for growth in labor productivity and for larger technical-economic indicators have been increased. Measures have been worked out to secure a savings of raw and other materials valued at 26 million rubles; a savings of 35,000 tons of standard fuel and of 12 million kilowatt hours of electrical energy due to decreased norms.

The role played by the production development fund in securing further growth in production capacities will increase. Through the use of this fund alone in 1984-1985 capacities will be introduced to process beets at the rate of 35,500 quintals per day, to process refined sugar--at a rate of 200 tons per day, candy products--11,000 tons per year and vegetable oil--500 tons per year. A significant portion of the resources in the production development fund is directed at improving the technology for the reception and storage of agricultural raw materials and in particular at strengthening the material-technical base of beet-reception points. The carrying out of the experiment must facilitate raising the entire level of economic work in the food industry.

This year's plan sets a goal before the ministry of the fruit and vegetable industry--to considerably increase the production and procurement of potatoes, vegetables, fruits and berries, to expand their assortment and to provide the population with as much early production as possible. It is also planned to increase the production of fruit and vegetable tinned goods to 9.7 billion standard cans, which is 7 percent more than was produced in 1983. The output of dried fruit must increase from 25,000 to 39,000 tons; quick frozen fruit and vegetable products--from 10,000 to 32,000 tons. There must be a significant improvement in the assortment of canned products, an increase in the output of green peas--by 20 percent, of snack tinned goods--by 15 percent and of jams, steamed fruit and preserves--by 20 percent, and an increase of no

less than 3 percent in labor productivity within the processing industry. This year commodity production within the fishing industry must equal 9.6 billion rubles according to the plan.

In order to successfully fulfill these goals it is necessary to secure a fuller utilization of the capacities of the fishing fleet, ports and ship repair and fish processing enterprises, to develop fishing and assimilate new fishing areas in open parts of the world's oceans, to efficiently utilize raw materials and on this basis to further increase output and to raise the quality and improve the assortment of fish products. There must be a rapid development of an improved assortment of products and an orientation toward utilizing fish raw materials firstly for food purposes. The dressing of fish must be increased and there must be a fuller utilization of wastes for feed products.

Workers of fields, farms and enterprises of food branches of industry are hoping that machine builders and chemists will take a new step to increase the output of highly effective means of production and materials. At the present time the introduction of complex mechanization in farming and livestock raising is being hindered because machine builders have not yet organized the production of hundreds of machines and units needed by the village, because some types of technology are produced in insufficient quantities and because some machines supplied to kolkhozes and sovkhoses are morally antiquated, undependable during operation and of a low productivity.

The resolution of the CPSU Central Committee and the USSR Council of Ministers, "On Measures to Further Raise the Technical Level and Quality of Machines and Equipment for Agriculture, to Improve the Use and and Increase the Production and Delivery of These in 1983-1990," develops a clear system of measures to significantly improve technical-economic indicators for machines and equipment supplied to the village. Machine building ministries, design bureaus and industrial enterprises have the goal of increasing the dependability and length of service of technology, of improving its productivity, of securing a decrease in material and energy consumption and an increase in suitability for repairs by creating and assimilating the production of qualitatively new technology as well as by modernizing machines and equipment being manufactured. It is planned to achieve a systematic transition to the production of systems, machine complexes and technological lines that will secure the complex mechanization of basic and auxiliary operations, to introduce industrial technology, and to maximally curtail the agrotechnical schedule for completing field work and losses of production. By means of this alone it is possible to secure a cardinal improvement in labor productivity in fields and on farms.

Life requires a radical improvement in the work of machine builders, who are called upon to supply modern technological lines and equipment to the food, meat, dairy, oil and fat, sugar, flour and groats and other branches of industry. In particular, for the accelerated development of production of potato products it is necessary to organize the mass production of the first highly productive native line having a capacity of 3,000 tons of ready product annually, which just passed inter-departmental tests. The ministry of machine building for the light and food industries must complete, in the shortest time possible, the development of equipment for producing potato rissoles,

patties, fruit dumplings with potatoes, garnish potatoes and potato chips. An increase in the production of potato products will allow us to significantly curtail potato losses during shipping and storage and will improve food supplies to the country's population.

From the workers of the chemical industry farmers expect a sharp increase in the output of mineral fertilizers and means to protect plants, especially highly effective herbicides. It is important to improve the quality of the means of chemization. Village workers hope that in the coming years the needs of agriculture will be more fully met with regard to microelements, feed supplements, coatings and chemical preservatives for feed.

The upcoming goals are great, responsible and at the same time attainable by all links of the agro-industrial complex. They arise out of the Food Program and are directed at improving the well-being of the Soviet people. For this reason it is the primary duty of the committee on questions related to the APK, ministries, departments, scientific institutions and soviets of agro-industrial associations to do everything possible to fulfill the party's goals with honor.

## V

At the December 1983 Plenum of the CPSU Central Committee the decisiveness of the party was clearly emphasized in regard to mobilizing the country's efforts to further improve the effectiveness of all branches of the economy. This requires an improvement of all economic and organizational work, an acceleration of scientific-technical progress and the activation and development of creative initiative among broad masses of workers.

The CPSU Central Committee and the USSR Council of Ministers, in raising procurement prices for agricultural products and introducing supplements to them for unprofitable and low-profit enterprises, intended to strengthen the economies of kolkhozes and sovkhoses and to increase the significance of cost accounting principles of management in the direction of increasing one's own sources of financing to cover ongoing and capital expenditures.

In connection with this there is cause for alarm in the noted undesirable tendency in the distribution of kolkhoz gross income. Despite the growth of the general savings and use fund from 23.1 billion rubles in 1970 to 26.8 billion rubles in 1982 the share of allocations into the savings fund decreased from 27 to 11 percent and there was a corresponding increase in allocations to the expenditure fund.

According to the results for 1983 in connection with the increase in procurement prices the enterprises of many rayons continued to increase loans from Gosbank and did not repay previous debts on schedule, despite a significant growth in income from the sale of products. This is not proper.

The Politburo of the CPSU Central Committee recently examined the question of the relationship of the growth of labor productivity and the growth of wages. The subject was industry. But in agriculture this question has acquired a

certain urgency. During the Eighth Five-Year Plan as compared to the Seventh labor productivity in kolkhozes increased by 31 percent and wages--by 63 percent; during the Ninth--22 and 30 percent respectively; during the 10th--14 and 27 percent and during 2 years of the current five-year plan--1 and 15 percent. We know that after the March 1965 Plenum of the CPSU Central Committee measures were taken to raise the level of wages in the village. But for many years now they have been surpassing the growth in labor productivity by a factor of 1.5-2.

This is why these and all other questions related to the forms of labor organization and its stimulation on the level of the link, brigade, section, farm and division deserve the most careful attention of agrarian economic science, agro-industrial associations and all directors and specialists of enterprises.

There must be a careful analysis of the function during the first year of the economic mechanism that was worked out in accordance with the decisions of the 26th party congress and subsequent plenums of the CPSU Central Committee; of the degree of increase in the income of enterprises not only as a result of increased prices and supplements but primarily as a result of improvements in the level of work of enterprises themselves, i.e., as a result of a growth in sales volume, of improvements in production quality, of improvements in labor productivity and of decreased costs. This is what our main task involves.

In the past year although there was a decrease in the number of unprofitable and low-profit enterprises still many kolkhozes and sovkhoses in all republics completed the year with losses or achieved insignificant profits. The soviets of agro-industrial associations must carefully examine the financial activities of such enterprises.

It is not enough to introduce price supplements in rendering effective aid to unprofitable and low-profit enterprises. The most important thing here is to supply them with technology, fertilizer and good contract workers, i.e., to direct efforts at strengthening their material and technical supplies.

The entire complex of planning-economic work in the enterprises and organizations of the APK must be strengthened. This presupposes not only an improvement in planning but also an improvement in accounts and accountability, the completion of a timely analysis of economic and financial activities and an increased severity in the economy regimen of every local production collective. In addition to this effective measures should be elaborated to materially stimulate collectives to economize on resources and a growth in labor productivity.

The goal established by the party--to achieve an above-plan increase of 1 percent in labor productivity-- means a savings of 300 million hours of work time in kolkhozes and sovkhoses or 600 million hours of work time in all branches of the agro-industrial complex. This is equivalent to a savings of labor of many tens of thousands of average annual workers. Fully capable of achievement is the goal to additionally decrease production costs by 0.5 percent. In kolkhozes and sovkhoses this will allow for a decrease in production expenditures of 600 million rubles; in all branches of the APK--of 1.2 billion rubles.

To achieve this goal it is necessary to more broadly introduce progressive forms of labor organization and reimbursement, especially collective contracts. The organization of effective intra-enterprise accounts in brigades, on farms, in shops and in all production sections must become the subject of special concern for the soviets of agro-industrial associations and all kolkhozes, sovkhozes and enterprises. First of all there should be a study of the existing experience of the work of collectives utilizing contracts and cost accounting. In some oblasts and rayons much that is interesting and useful has been accumulated in this regard. But there are cases of a purely formal approach to this important matter. Links sometimes fall apart and cost accounting exists on paper and is formal in nature. The method of collective contracts and effective intra-enterprise accounts must be oriented toward securing high end results in the production of high-quality products with minimal expenditures of material and monetary resources and labor for the production of each ton of product.

The CPSU Central Committee and USSR Council of Ministers have done a great deal to strengthen the material-technical base of branches of the agro-industrial complex, to increase the material interest of kolkhozes and sovkhozes and to improve administration. Now the center of gravity is being moved to enterprises, brigades, departments, shops and links. It is here in the field, on the farm, in the shop or on the production plot that the successful fulfillment of the Food Program will be decided.

This is why the work of the Committee on Questions Related to the Agro-Industrial Complex of the Presidium of the Council of Ministers, of ministries and departments and of soviets of agro-industrial associations must be directed at securing improvements in all local production collectives and at mobilizing the internal reserves of enterprises and organizations.

Everything taken together will enable us to fulfill and overfulfill plans and socialist obligations for 1984 and for the five-year plan as a whole.

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[Article by Candidate of Economic Sciences G. Belousenko, deputy chief of the Central Finance Administration of the RSFSR Ministry of Agriculture: "The Formation of Working Capital at Agro-Industrial Enterprises and Associations"]

[Text] For the successful accomplishment of the tasks on the fulfillment of the Food Program it is necessary not only to achieve the fundamental unity of all the sectors, which are a part of the agro-industrial complex of the country, but also to improve the economic mechanism, of which financial and credit levers are a component. It is necessary to see to it that the financial and credit resources, which are being channeled into the development of the agro-industrial complex, would be used most efficiently and would actively influence the end result of production.

The experience of the operation of agro-industrial enterprises and associations in fruit and vegetable growing, viticulture and wine making attests to the unmistakable advantages of the fundamental combination of agricultural and industrial production. The successful results of the integration process in many ways depend on the use of working capital in agro-industrial formations. The interrelations between agricultural and industrial enterprises, which are based on direct ties, have a substantial influence on the circulation of capital. The different organizational structures of agricultural and industrial production and the nature of the economic interrelations between them are responsible for the different turnover rate of capital at agro-industrial enterprises and associations.

A certain leveling of the seasonal fluctuations of the need for working capital is achieved in case of the combination of agricultural production with the processing industry within the agro-industrial enterprise, which represents a unified economic organism. This is connected with the high level of centralization and the maneuverability of financial and credit resources, which are constantly in circulation, passing in succession through all the stages of the process of reproduction. The working capital of one production subdivision (agricultural or industrial), which is being freed, is channeled into another one, which is experiencing a need for the indicated resources and has the opportunity to use them most efficiently.

At agro-industrial enterprises the working capital, which has been advanced to agriculture, in the process of circulation is gradually transferred to the sphere of industrial production and is freed as a result of the sale of the final product. The turning over of agricultural raw materials for industrial processing is not mediated by the act of buying and selling. Here at the agro-industrial enterprises instances of the refusal to accept agricultural raw materials for industrial processing practically do not occur, which is an important factor of their complete use within the unified economic organism. The possibility of shifting working capital extensively enables the agro-industrial enterprise to carry out with fewer resources continuous production activity. This promotes the increase of the efficiency of the use of working capital and leads to the acceleration of its turnover rate, the shortening of the time, during which credit of the State Bank is in circulation, and the economical consumption of the credit resources of the state.

The agricultural and industrial enterprises, which are a part of agro-industrial associations, retain their cost accounting independence. Therefore, the fundamental difference of the turnover rate of the capital of the agro-industrial association and the agro-industrial enterprise consists in the fact that the interrelations between the agricultural and industrial units are organized by means of the act of buying and selling.

In most instances the narrow specialization of the production of one of several types of products, for example, vegetables, fruits, grapes and others, which are delivered only for industrial processing, is absent in the agricultural units of agro-industrial enterprises and associations. Moreover, the constantly increasing need of the population for these products is responsible for the need even in case of narrow specialization to sell a portion of them to the immediate consumer. Owing to this a portion of the finished products, which have been produced in the agricultural unit, immediately after the completion of the circulation of the capital is sold on the side. Here at the agro-industrial enterprise the receipts from the sale of agricultural products enter the current or special loan account and are used for the needs of agriculture or industry depending on what unit at this time is experiencing the greatest need for working capital.

In agro-industrial associations the receipts from the sale of agricultural products are credited to the current or special loan accounts of sovkhoses and are used only for their needs, which is due to their cost accounting independence. That is why the instances, when within an association the sovkhoses have significant net surpluses of their own capital in accounts at the State Bank, while the industrial enterprises, which process fruit and vegetable products, experience a shortage of capital and enlist credit of the State Bank extensively, are frequent. In this connection it is necessary to note that the independent sectors, which have been included in agro-industrial associations of fruit and vegetable growing, not only are characterized by the technological diversity of production, but also have significant differences in the systems of management, planning and economic stimulation. These systems orient agricultural and industrial production, and frequently trade activity as well, toward the achievement of high end results not of the association as a whole, but of each individual sector.



The high production cost of canned fruits and vegetables, which frequently leads to the unprofitable activity of the industrial unit of the enterprises being integrated, is due to both subjective and objective factors. It is necessary to group with the former the considerable losses of the vegetables, fruits and berries, which are being delivered for industrial processing, the violation of technological and planning discipline and the large expenditures of manual labor. The level of the mechanization of labor at the canneries of the USSR Ministry of the Fruit and Vegetable Industry comes to 35.3 percent. Labor productivity is low, many low quality canned goods are being produced. As a result of the checks, which were made by control organs, with respect to the USSR Ministry of the Fruit and Vegetable Industry in 1981 6,918,100 conventional cans were condemned and 1,835,200 conventional cans were removed from the sales plan. In 9 months of 1982 5,474,000 conventional cans were condemned, complaints from customers about delivered canned goods in the amount of 51,369,00 conventional cans were received, 5,620,900 conventional cans with a value of 1.2 million rubles were removed from the sales plan.

At the same time the unprofitable activity of the industrial enterprises, which are a part of agro-industrial associations of fruit and vegetable growing, stems from the shortcomings in the system of the pricing of canned goods. The retail prices for them were formed during the postwar years on the basis of the extremely low purchase prices which were in effect in agriculture, while subsequently the retail prices for canned fruits and vegetables became totally out of line with the purchase prices being newly introduced for potatoes, vegetables and fruits.

With the changeover to the new system of planning and economic stimulation for the canning industry a system of wholesale price markups for unprofitable canned fruits and vegetables was introduced, price reductions for highly profitable types of products and the amount of the excess of the markups over the reductions at the level of 4 percent of the volume of sold products were established. Subsequently in connection with the continuing rise of purchase prices and the increase of the other expenditures on production the amount of the excess of the wholesale price markups over the reductions was repeatedly increased and is now being planned at the level of 23 percent, but actually comes to 29 percent. In connection with the increase as of 1 January 1982 of the wholesale prices for industrial goods and as of 1 January 1983 of the purchase prices in agriculture the excess of the wholesale price markups over the reductions for canned goods comes to approximately 50 percent (of the level of the prices in effect). In this connection the system of wholesale price markups for unprofitable canned fruits and vegetables and their reductions for highly profitable types of products is losing its importance and does not have an influence on the increase of production efficiency under the conditions of agro-industrial integration.

It should be noted that significant losses in case of the production and storage of potatoes, vegetables and fruits are occurring in the agricultural unit, which is adversely affecting the ratio of the growth rates of the production cost and the selling prices of products. Therefore, in spite of the repeated increase of purchase prices, many agricultural enterprises when selling potatoes and vegetables are incurring losses. In 1982 67 percent of the sovkhoses of the RSFSR, which specialize in the production of potatoes, and 74 percent of the vegetable-growing farms operated without a profit.

In our opinion, it is possible to eliminate the unprofitability in the agricultural and industrial units of the agro-industrial complex first of all by the reduction of the losses at all the stages of the technological process and the saving of manpower and financial resources. On this basis it would seem possible to settle basically the questions of pricing in the industrial and agricultural units.

We believe that for the industrial enterprises, which process fruit and vegetable raw materials and implement a strict policy of economy in the consumption of material, manpower and financial resources, it is advisable to establish wholesale prices for canned goods, which would ensure a minimum profitability of their production. The difference between the wholesale and retail prices should be recovered through the wholesale sales unit. Agro-industrial associations should be granted the right to allocate as needed the net surplus of the profit, which is formed at sovkhoses, for the needs of industrial production, by reducing by the amount of the redistributed profit the payment of the difference between the wholesale and retail prices of the products of canning.

The continuous turnover of capital and the end results of the activity of agro-industrial enterprises and associations in many ways depend on their supply with agricultural raw materials of their own production.

Practical experience shows that the lack of a balance between the production of raw materials in the agricultural unit and the utilization of the capacities of the industrial enterprises, which are engaged in their processing, is one of the serious shortcomings in the activity of agro-industrial formations. Such disproportions are not eliminated even when a significant amount of agricultural raw materials for industrial processing is received on the side, that is, from kolkhoses and sovkhoses, which are not participants in the integration. Thus, the production capacities of the canneries, which are a part of the Checheno-Ingushskoye Agro-Industrial Association of Fruit and Vegetable Growing, in 1981 were used at the level of only 60.1 percent, including for canned vegetables--52.4 percent and canned tomatoes--28 percent. In the Kabardino-Balkarskoye Agro-Industrial Association of Fruit and Vegetable Growing the production capacities of the canneries were used at the level of 63.2 percent, including for canned vegetables--96.4 percent, canned tomatoes--22.7 percent and canned fruits--63.7 percent.

The procurement of raw materials on the side, at kolkhoses and sovkhoses which are located a considerable distance from the canneries, leads to the unproductive expenditure of considerable assets on transportation, to the increase of the cost of the final product, frequently to unprofitable activity, the loss of internal working capital and the violation of the dates of payment on loans of the State Bank.

The foregoing attests that some agro-industrial formations were set up without adequate technical and economic substantiation. The lack of a systems approach to the solution of the problems of integration checked the development of new forms of the organization of social production. Meanwhile an integral system of agro-industrial integration requires the coordinated development of the set of all its elements, which are fundamentally interconnected and are subordinate to the goals of the boosting of production, the increase of product quality and

the decrease of the product cost. Only in this case is it possible to achieve such a situation that each element of the system would work effectively and efficiently. That is why in case of the preservation of the achieved positive things in the operation of agro-industrial formations a new stimulus, which ensures the smooth operation of the entire system and makes it possible to settle efficiently the production questions of agro-industrial enterprises and associations, is necessary.

Steps, which are aimed at increasing the responsibility and interest of enterprises and organizations, which serve kolkhozes and sovkhozes, in the end results of their activity, are outlined in the decree of the CPSU Central Committee and the USSR Council of Ministers "On the Improvement of the Economic Interrelations of Agriculture With the Other Sectors of the National Economy." Moreover, a fundamentally new procedure of settlements for the work performed for agricultural enterprises has been introduced. The responsibility for the observance of contractual obligations and the delivery by manufacturing enterprises to agriculture of high quality machinery, machines and equipment has also been increased. The improvement of the system of management of the agro-industrial complex and of the economic interrelations of agriculture with the other sectors of the national economy, the effective stimulation of highly productive labor and the increase of the responsibility of enterprises and associations for the unconditional fulfillment of the set plans, undoubtedly, will promote the increase of the amount of the food fund and the profitability of production.

At the same time, on the one hand, the increase of the production of output at agro-industrial enterprises and associations will require the additional advancing of working capital, while, on the other, as a result of the intensification of production a decrease of the expenditures per unit of output and the acceleration of the turnover rate of capital will be achieved. It seems that at agro-industrial enterprises and associations the growth rates of the production and sale of products will increase more rapidly as compared with the growth rate of the expenditures on production, particularly with the amount of advanced working capital, a significant portion of which is formed by means of credit of the State Bank.

At the Donkonserv Agro-Industrial Association in 1981-1982 the proportion of short-term credit of the State Bank in the sources of the formation of the working capital came to 87.3 percent, including 89.1 percent in the agricultural unit and 80.4 percent in the industrial unit. In other agro-industrial formations the leading role in the sources of the formation of working capital and the assurance of its continuous turnover also belongs to short-term credit of the State Bank. The analysis of the structure of the credit investments, which were made available in 1981 to the Dagkonserv Agro-Industrial Association, attests that the proportion of the short-term loans, which serve the sphere of production, ranges from 51 to 67 percent, including from 36 to 81 percent at sovkhozes, from 76 to 99 percent at sovkhoz plants and from 42 to 59 percent at the industrial enterprises which process agricultural raw materials. The short-term credit, which covers the cost of the actual stocks of finished products, which are in the sphere of circulation, in 1981 accounted for 61 percent, while during the year it ranged from 45 to 100 percent.

The foregoing makes it possible to draw the conclusion that in the improvement of the economic mechanism bank credit as one of the powerful levers, which actively influence the end results of economic operations and contribute to the realization of the continuous turnover of working capital, is of great importance. The credit of the State Bank, which is made available to agro-industrial enterprises and associations, is called upon to promote in every possible way the improvement of the quality of the output being produced, the better use of material, manpower and financial resources and the tightening up of the policy of economy at all the stages of circulation. The amounts of the credits being issued should be made directly dependent on the end results of the work.

It seems that the above-noted trend of a high proportion of credit in the sources of the formation of the working capital of agro-industrial enterprises and associations will also be preserved in the future. Therefore the short-term credit of the State Bank will also hold in the future an important place in the development of the agrarian sector of the economy, as well as of the enterprises of other sectors, which are a part of the agro-industrial complex, acting as one of the tools of the implementation of the economic policy of the party and contributing to the successful solution of the food problem. From this it follows that as a result of the acceleration of the turnover rate of working capital at agro-industrial enterprises and associations the rate of credit investments as compared with the preceding period will decrease, although the amount of the credits of the State Bank, which are being attracted, in absolute terms may increase.

It should be said that the prevailing mechanism of the extension of short-term credit to enterprises was developed during the period of the separate functioning of the sectors which are a part of the agro-industrial associations. At the agro-industrial associations of fruit and vegetable growing, where the sovkhoses, which are a part of them, are losing legal independence and are operating under the conditions of internal cost accounting, the issuing of credit for the payment for commodity stocks, production outlays and other needs is being carried out not in accordance with a uniform principle.

A special loan account, the issuing of credit from which is carried out without a limit and regardless of the state of settlements on previously obtained loans, is opened for the association for settlements for the agricultural products which have been purchased from sovkhoses, kolkhoses and the population for processing and sale. The above-standard paid-for balances of agricultural raw materials, including the raw materials of their own production and purchased semifinished products, are accepted as collateral of the debt on the special loan account. The receipts from the sale of products and other monetary payments are credited to the current account, except for the amounts of reimbursement of the difference in the prices for agricultural raw materials, which are credited directly to the special loan account. The repayment of the debt on the special loan account is made from the current account in the amount of the planned payments.

Credit is issued to the agro-industrial formation against all the other above-standard reserves of commodity stocks and expenditures within the set limits from simple loan accounts. Thus, credit is extended for all the commodity stocks and expenditures and their entire turnover, but this is carried out by

two methods of the granting of borrowed assets through the simple and special loan accounts. Here the effect of the special loan account is limited and the role of simple loan accounts is enhanced.

Different systems of the extension of short-term credit to agricultural and industrial enterprises, which are participants in the integration, are also used in the agro-industrial associations of fruit and vegetable growing, viticulture and wine making, the participants in which preserve legal independence. Sovkhozes receive short-term credit in the manner and on the terms, which have been established for state agricultural enterprises. The peculiarity of the extension of short-term credit to the industrial enterprises, which process agricultural raw materials, consists in the fact that, first, at them the division of commodity stocks into expenditures for which credit is and is not extended, which has not justified itself in practice, is being maintained. Second, the credits for the backing of the settlements with workers and employees on wages are issued to industrial enterprises in a one-time manner as an exception and from the simple loan account. Under ordinary conditions the settlements on wages are backed by the obtaining of assets from the current account.

In the Moldavian SSR credit is extended to the agro-industrial enterprises and associations of viticulture and wine making, as to sovkhozes, through the special loan account, to which the receipts from the sale of products and other monetary payments are credited. The expenditures on the formation of the main herd and the increase of the standard of internal working capital with respect to industrial activity are not objects of the extension of bank credit through the special loan account. Agro-industrial enterprises and associations also do not receive credit for covering the cost of finished products.

Some economists believe that the extension of credit to agro-industrial enterprises and associations through special loan accounts limits the possibilities of shifting the available resources. The opponents of the creation of a unified system of the extension of short-term credit to agro-industrial enterprises and associations on the basis of the granting of credit from the special loan account believe that the allocation of receipts directly for the repayment of the loan debt not only is responsible for the emergence of unsecured indebtedness, but also leads to the covering by means of credit of a portion of the constant reserves of commodity stocks and production expenditures. This violates the principles of the repayability and special purpose of credit. In case of such a system of lending, some economists believe, the cost accounting principles of management are violated. But it is impossible to agree with such arguments.

We believe that the use of the special loan account makes it possible to coordinate the functioning of credit as much as possible with the movement of commodity stocks and production expenditures, to ensure continuous settlements on wages and for the arriving commodity stocks and to channel a portion of the assets into the current account, which corresponds to the proportion of the non-material expenditures and the profit. The fundamental interconnection of the movement of the amount of payment assets and credits requires the combination of these processes under the conditions of agro-industrial integration. The mediation of the entire payment turnover by credit and the allocation of the incoming receipts for the repayment of the loan indebtedness are achieved only in case of the extension of credit through special loan accounts.

First, this creates the economic prerequisites for the active influencing of the fulfillment by enterprises and associations of the quantitative and qualitative indicators of the plan and the influencing of the end results of their work. Second, the mediation by credit of the entire payment turnover not only is an objective necessity, but also follows from the uniform nature of the circulation of the assets of integrated enterprises and associations and from the essence and role of credit, by acting as the basic method which influences the increase of the efficiency of social production. The artificial separation of the unified payment turnover into two parts and the concentration of the debt of the State Bank in individual loan accounts are at variance with the objective laws of the development of credit.

It is impossible to agree that in case of the extension of credit through special loan accounts the rights of enterprises and associations in the shifting of resources are limited, their cost accounting interests are harmed, while the entering of monetary receipts to the repayment of the issued credits ostensibly is responsible for the emergence of unsecured indebtedness and leads to the violation of the principle of the repayability of credit. On the contrary, the mechanism of the extension of short-term credit through special loan accounts, when the incoming receipts from the sale of products are systematically and directly allocated for the repayment of previously received credits, prevents the formation of unsecured indebtedness, promoting in every possible way the repayability of credits.

If the expenditures of agro-industrial enterprises and associations are covered by means of bank credit, while fully meeting the needs of the reproduction process and ensuring its continuity, the receipts from the sale of products, of course, should go for the repayment of the loan indebtedness. And in this case there is no restriction of and interference with the cost accounting rights of enterprises and associations and the fulfillment by the State Bank of functions of the regulation of the incoming receipts, which are not entirely characteristic of it, as it seems to some economists. The most flexible shifting of internal and borrowed resources is ensured and the efficient use of the credit resources of the state is achieved by the crediting of the monetary receipts directly to the repayment of the debt on the loan. The change of the procedure of the crediting of the incoming receipts will lead to the artificial increase of the need for credit and to the decrease of the efficiency of its use and will have a negative influence on the systematic nature of the entire process of social reproduction.

For the purposes of the improvement of the economic mechanism in the direction of the more efficient and effective use of working capital, as we believe, it is necessary to reject the traditional and obsolete methods of the extension of short-term credit to agro-industrial enterprises and associations. It is a matter of the covering by means of bank credit of only the above-standard reserves of commodity stocks and the production expenditures and of the covering of their standard portion by means of internal working capital.

In agriculture, industry and trade short-term credit in practice has gone beyond not only the seasonal above-standard fluctuations, but also the so-called constant (standard) portion of the working capital. However, this should not be regarded as a negative phenomenon which is to be eliminated. It seems to us

that such a going of credit beyond the covering of the above-standard reserves of commodity stocks and the production expenditures in principle is a normal phenomenon, which does not violate the economic essence, the principles of the organization and the repayability of borrowed assets.

The repayment of credit is ensured not only by the seasonal outflows, which decrease the need for working capital, but also by the continuous turnover of all commodity stocks and the monetary assets included in them. That is why the point of view that the so-called constant nondecreasing standardized reserves of commodity stocks and the production expenditures should be covered by internal working capital, while their fluctuating above-standard portion should be covered by bank credits, is inadequately sound.

Of course, this does not mean that it is necessary to cover by means of credit of the State Bank the unprofitable activity of enterprises and associations, purchased commodity stocks, which are not used for a long time in the reproduction process, finished products, which are not in demand among the population, and so on. It is important that agro-industrial enterprises and associations, as well as the institutions of the State Bank would establish effective control in case of the payment for the income commodity stocks, examining in each specific case their actual need for the production of the final product and not allowing the output of finished products (for example, several types of canned goods), which are not in demand or have a limited demand with the consumer. Otherwise a portion of the material, manpower and financial resources will be used inefficiency, which does harm to the national economy.

The study of consumer demand among the population and forecasting, by means of which it is possible to determine the actually necessary structure and assortment composition of the final product, should be organized. At the same time wholesale and retail trade organizations should make exacting demands on the agro-industrial enterprises and associations, which produce fruit and vegetable products, with respect to their quality, assortment and timely delivery to the trade network. The consolidation of the cost accounting methods of management directly in the agro-industrial formations, as well as the most efficient use of the financial and credit resources of the state to a considerable extent will depend on this.

The prevailing mechanism of the extension of short-term credit to agro-industrial enterprises like the sovkhoz plant with the use of a special loan account conforms to the peculiarities of the turnover rate of their working capital. Thus, at the initial stage of circulation the credit mediates the process of agricultural production, gradually taking part in the covering of the reserves of commodity stocks and the expenditures of unfinished production. Then with the arrival of raw materials for industrial processing the credit, following the movement of the commodity stocks, is gradually transferred from the sphere of agricultural production to the sphere of industrial production, where it assumes the form of short-term credit against the stocks of raw materials and materials of unfinished industrial production, the finished products and the shipped goods.

The reserves of commodity stocks and the expenditures of unfinished production are the largest objects of the credit investments of agro-industrial

enterprises like the sovkhoz plant. The extension of credit to agro-industrial enterprises through special loan accounts made it possible to take into account several specific peculiarities, which stem from agricultural production and the industrial processing of raw materials, to broaden somewhat the objects and to simplify to a certain extent the method of making borrowed assets available.

In our opinion, in agro-industrial associations the need for the preservation of the different systems of the extension of short-term credit to its participants has disappeared. Moreover, the different mechanism of making borrowed assets available to agricultural and industrial enterprises is becoming a substantial hindrance in the further development of the processes of agro-industrial integration.

The mechanism of the extension of short-term credit to the participants in agro-industrial associations does not differ from the prevailing procedure of the individual making of borrowed assets available to ordinary agricultural and industrial enterprises. This procedure is strictly regulated by various enforceable enactments, instructions and statutes, which were formulated during different periods of the development of the socialist economy and under the influence of various principles of economic management. The mechanical carrying over of the previously prevailing system of the extension of short-term credit, which is used with respect to individual agricultural and industrial enterprises, to the qualitatively new conditions of agro-industrial integration is responsible for the emergence of serious contradictions between the uniform nature of the circulation of assets and the practice of issuing credit. Under such conditions the movement of credit takes place in the spheres of agricultural and industrial production, which are closed and isolated from each other, its issuing and repayment are not linked with the real change of the needs of agro-industrial associations for working capital and short-term credit as a source of its formation.

Whereas under the conditions of the isolated development of agricultural and industrial production the increase or decrease of the debt on the special loan account records the corresponding change of the need of the separately taken enterprise for working capital, in case of the separate extension of credit to the participants in the agro-industrial association it is impossible to establish this. We are basing ourselves on the fact that the increase or decrease of the debt on loans of the separately taken agricultural or industrial enterprise does not imply the corresponding change of the need for working capital and credit for the association as a whole. Consequently, in case of the individual making of borrowed assets available the short-term credit, while detecting the change of the need for working capital of each individual participant in the association, does not record the change of the need for working capital and credits of the agro-industrial association as a whole.

The lack of a uniform system of the extension of short-term credit to the enterprises, which are a part of an agro-industrial association, does not make it possible to shift efficiently the total fund of working capital and eliminates the opportunity to influence efficiently by credit the economic operations of each unit. All this is responsible for the emergence of conflicts in the economic interests of agricultural and industrial enterprises and does not make it possible to ensure the fundamental unity of all the participants in the



integration process, which, in turn, is a substantial obstacle in the way of the transformation of agro-industrial associations into the main cost accounting units of the agro-industrial complex of the country.

The problem of elaborating a more perfect standardized model of the extension of short-term credit to the enterprises which are a part of agro-industrial associations, which would take into account to the greatest possible extent all the positive aspects of the prevailing method of making assets available to the agricultural and industrial units, is arising in this connection.

In case of the elaboration of such a model it is necessary to consider that at present credit is being extended to the majority of enterprises with respect to the circulation of physical assets and expenditures with the use of a special loan account. Owing to the peculiarities of the turnover rate of assets at enterprises with a seasonal nature of production and of the very mechanism of the extension of credit the borrowed assets mediate extensively the payment turnover and make up a significant proportion in the sources of the formation of working capital. The objective process of the influx and outflow of monetary assets of enterprises with a seasonal nature of production requires the extensive and flexible involvement of credit in the economic process.

In our opinion, the uniform system of the extension of short-term credit should provide approximately equal conditions and a standardized procedure of the making of borrowed assets available to the enterprises, which are a part of agro-industrial associations, having eliminated the division of the commodity stocks into those for which credit is and is not extended. In case of such a system not only the above-standard need for reserves of commodity stocks and expenditures, but also their standard portion within specific limits should act as the object of the extension of short-term credit. In all cases such a system of making borrowed assets available to agro-industrial associations should contribute to the increase of the effectiveness of credit and the more efficient use of the credit resources of the state.

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PROBLEMS OF ESTONIAN SCIENCE-RESEARCH ASSOCIATIONS, FOLLOW-UP

Economic Efficiency in Question

Tallinn SOVETSKAYA ESTONIYA in Russian 9 Feb 84 p 2

[Article by L. Sher: "Science on Cost Accounting? Polemical Remarks"]

[Text] First Postulate: It is asserted that the most efficient investment in resources is investment in science. If this opinion were held only by scientists themselves, it would be dangerous to use it as a postulate. However, it is shared by economists, planners and financial specialists.

Second Postulate: There can be no doubt that in the epoch of the scientific-technical revolution science has become a force of production. Success or failure in the entire economy's development depend upon the rate of growth in scientific thought and upon the practical introduction of scientific achievements.

Third Postulate: Our rates are still not satisfactory. This was mentioned in particular in a speech by Yu. V. Andropov at the December (1983) CPSU Central Committee Plenum. He stressed that "...the organization of the entire complex of scientific and technical work is still far from complete." As the problem is extremely broad, in order not "to scatter thoughts around the tree" we will have a narrow framework: We will restrict ourselves to two scientific-research institutes in ESSR. Agroprom and the farms subordinate to them.

Dual Power

The Tartu Support-Demonstration Sovkhoz is a well known, strong and diverse farm. Subordinate to the ENIIZhiv [Estonian Scientific Research Institute for Animal Husbandry and Veterinary Science], it has been praised not so much for high milk yields as for stable, high crop yields -- about 4,000 feed units per hectare. Is this a paradox? No, there is a pattern here. In general, there is a similar picture for institute farms. Those in the ENIIZhiv have higher crop yields, while those in the ENIIzim [ENII Cropping and Land Melioration] have higher milk yields and weight gains. We will return to the reasons for this.

The Tartu has about 8,500 hectares of land, including almost 5,000 of crop land, and its fixed capital is valued at 21.7 million rubles. It has the most powerful potential and is productive. Only a small part of it is directly working on science: the experimental dairy barn in Vorbuz, an artificial insemination station and a large farm at Rakhing. The main thing is that the farm is directed towards and lives off agricultural output, the same meat, milk, potatoes and grain produced at any ordinary farm.

After the creation of the RAPO [Rayon agricultural production association] it began to work on this aspect of the work of the institute's farms. Meat, milk and everything else is included in the RAPO general plan. Under this plan the RAPO allocates the farm equipment and materials. Its fulfillment provides the farm with profit to create all its funds, including the material stimulation fund.

The institute, to which the sovkhos is legally subordinate, has practically no relationship to this very important aspect of its activity. True, the RAPO approves the sovkhos's plan upon the agreement of the institute, but one thing is important to the latter -- that this plan does not interfere with scientific research.

The RAPO is completely uninterested in such research, as it is responsible for production.

The institute has administrative rights while the RAPO has, as they say, material levers. It isn't difficult to guess how any farm manager who gives it the slightest thought will behave: He will prefer the reprimand for breaking the scientific research plan to the thousands of rubles denied the material incentives fund for nonfulfillment of the production plan.

The institute manager should say: We, and nobody else, approve the experimental farm profit plan. This is correct. Then it should be added that farm managers and specialists can only be awarded six monthly salaries annually for production successes, while the remaining individuals get a maximum of up to 3.6 salaries only if the scientific research plan is fulfilled in an exemplary manner. This is also correct. There is a complication, all bonuses come from profit, while the fund is formed only if the production plan is fulfilled.

However, our first postulate states that investments in science are repaid generously. Therefore, shouldn't investments in the scientific research plan bring the farm a solid profit? This is often not the case. Returns from science are measured by the economic effect resulting from the introduction of new, already refined technology. For example, one can say that if everything turns out as planned, then the new technology for harvesting clover seeds created by ENIIZiM will produce a colossal effect. If, that is, things turn out.

The transition to the artificial insemination of agricultural animals is, when only bulls of certified improved genetic stock are used, one of the most important factors in improving milk output at farms in our republic. However, each bull must be certified!

It is normal for 4 - 5 such bulls to sire the offspring at a farm. At the Tartu Sovkhos 28 animals were approved in 1976 and 37 in 1977. It turned out that

by no means all of them improved the breed. There were some which caused it to deteriorate and which were rejected. Thus, the damage will not be felt by other farms, but it was very noticeable in the Tartu herd. Isn't this one of the reasons why, with a strong feed base, capable of assuring milk output in the 5,000 - 6,000 kilogram range, they have a difficult time passing the 4,000 kg mark here? In any case, this was mentioned by Kh. Parik, the sovkhos director and his deputy for animal husbandry A. Reytalu. They have failed to obtain thousands of tons of milk. The milkers are paid by the kilogram. Who makes up this loss to the farm and to the milkers who come up short? The RAPO or the institute? Neither.

Or take the experiments in embryo transplantation. These undoubtedly have great promise. So far, however, for the Tartu Sovkhoz the result has been hundreds of lost calves. If one includes a more distant consequence of this, the loss of milk and offspring not obtained, then the result is a very solid sum. Nobody will compensate the farm for this.

It is fundamentally improper to blame the institute for unsuccessful experiments. Risks are unavoidable in scientific research. If each scientific idea were "doomed" to immediate success, there would be no need at all for experimental farms or experiments. The method of trial and error is used for even the best ideas, from initial development to the introduction of industrial technology. This is the only way to crystalize the truth. The unavoidable losses this involves are paid off with interest at a national economic scale, but this is not so at the scale of an experimental farm.

Take another example: The Yygeva Support-Demonstration Sovkhoz raises elite seeds for new varieties of agricultural crops for the entire republic. It has large areas under such crops, but does not obtain high yields from seed fields as excessive fertilizers and other factors might damage quality. These seeds require much more work. Each variety needs its own drier, for if a few grains from one got into another batch, both would be spoiled.

Why must Yygeva RAPO do all or even part of this work, the results of which are obtained by other regions?

One can object that conscience and consciousness show that all this is done for the common good. This is completely correct, but one cannot base everything on the moral aspects. I am now talking about the economic mechanism, or more accurately about imperfections in an economic mechanism which should create an interest in the development of science on the part of all participants in this process. It is clear that so far nobody, not even the institute, has an interest in this.

"Brain Center"

Paradoxical as it may seem, the "brain center" is called upon to generate ideas, but at present it has no economic interest in their efficiency.

Suppose that technology created at the institute turns out to be inefficient. Who is responsible? The institute? No. The developer or designer? No. And what about

the contrary case, if the technology turns out to be very efficient and produces a huge income for the national economy. What does the institute get? Nothing. What about the specialists? Also nothing, if one does not include reputation and fame. However, these are not economic categories.

The institute, of course, can give bonuses to specialists. There is a fund for this, it is 0.2 percent of the wage fund. Is it worth it to seriously talk about the incentive effect of such a fund?

It can be objected: "This is why specialists' salaries are so high."

Think about it, however. On what do such salaries depend? Not upon the efficiency of scientific developments, but mainly upon the possession of an academic degree. It would be incorrect to assert that all dissertations are worthless. But even assuming that every dissertation is a serious contribution to science, where does it lead us? To the fact that when a candidate's or doctor's degree has been defended, one can live easily. No force is capable of changing one's salary, if the duties of the job are fulfilled, even at minimal levels. What can arouse someone to maximum effort? A specialists enthusiasm and dedication to the cause of science. This is extremely important, but, remember, Lenin pointed out that one should not base everything on enthusiasm alone.

Unfortunately, there is not yet an economic mechanism which could regulate these relations. It is not suprising that the special commission set up at ESSR Agroprom, having recently examined the scientific work plans of two institutes, eliminated several research subjects which had neither promise nor practical significance. This in itself is a step forward, but some of these themes have been in the plans for almost a decade.

Administrative levers are thus still used to solve problems of the efficiency of scientific work. These solutions are often very slow, coming only after substantial sums have been spent from the state's pocket and have only resulted in small returns.

Possibly things have been painted a bit thick here in order to attract attention to the problem's urgency. After all we are vividly aware that the republic's specialists, including those at the two institutes being discussed are making a huge contribution to the development of the republic's economy and to the solution of social problems. This is indisputable. The problem is that this contribution could be even greater.

#### The Main Product -- New Technology

So far, the negative particle has predominated in these arguments. The discussion has covered what has not been done. Criticism, however, should be constructive. We will also try to think about what could be done.

As a starting point we take the first of the initial postulates: every ruble invested in science gives a solid return. So, what if a definite percentage of this return were allocated to the development of science itself? There is no need to discover "America". This is simply the well known principle of cost accounting

which, incidentally, is also stressed in the CPSU Central Committee and USSR Council of Ministers Decree: "On Measures for Accelerating Scientific-Technical Progress in the National Economy" passed in August 1983.

Assume that a scientific-production association (NPO) has been created. It includes an institute generating scientific ideas, small experimental farms and shops for testing these ideas. There are also larger farms and enterprises (for example, an experimental plant for new equipment) producing the final product -- new integrated technology and a set of machinery for implementing it.

In addition to developing technology, the association also introduces it at those farms which express a desire to acquire it. These are gestorskiy [gestor-leading or supervisory farms] type relations, now used in Hungary. The farms' payment to the NPO for the technology and its introduction depends upon its economic effectiveness. The NPO exists on these resources.

Here is what happens: the more efficient the technology and the more the farm introduces -- the greater the income of the association. This means more funds which can be allocated to scientific research and more material incentives funds for everybody -- from scientists to rank and file farm workers participating in the development of technology.

For it is new technology which will become the main product of the NPO taken as a whole. This also eliminates the problem of "dual power". Such NPO output -- meat, milk and other items, will probably be insignificant and not have a major effect upon plan fulfillment, especially if the NPO is directly subordinate to republic Agroprom, with this output being included directly in republic indicators. The accelerated introduction of scientific achievements into the republic's practical farming operations will not only compensate, but pay off many fold the relatively low levels of such output at experimental farms. An experimental farm will be purely experimental, working on science. The evaluation of its activity will be based upon its scientific developments. Before me lies a pamphlet: "Basic Indicators of Experimental Farms of the Estonian Scientific Research Institute for Animal Husbandry and Veterinary Science"; it does not contain a single word or figure about experiments or science. There are not even any graphs. Isn't this truly symbolic?

Understandably, the reorientation of the republic's agricultural scientific-production complex is a difficult, laborious job, posing many serious problems. However, if we accept the third postulate, then this transformation is necessary. If nothing is done nothing will result. [Pod lezhachiy zh kamen' i voda ne techet.].

L. Sher.

It is no accident that this article is polemical. It is aimed at engaging our readers in a broad discussion of the problem. It seems to us that it merits this.

Commentary of Institute Official

Tallinn SOVETSKAYA ESTONIYA in Russian 28 Apr 84 p 2

[Article by T. Vayn, deputy director, ENNIZhiV: "In Search of an Optimal Solution: A Discussion of the Article 'Science on Cost Accounting'"]

[Text] This was the headline of an article in our newspaper printed on 9 February. It discussed problems of improving the efficiency of scientific research organizations in the republic's agro-industrial complex, and accelerating the practical introduction of agricultural science's achievements. In particular, it posed the problem of creating scientific-production associations operating on the basis of cost accounting, the main output of which should be new technology. It was suggested to make such associations introductory organizations, the incomes of which would directly depend upon the scales of introduction and the economic effects farms obtain. Today we continue the discussion on this subject.

The Estonian Scientific Research Institute for Animal Husbandry and Veterinary Science (ENIIZhiV) is part of ESSR Agroprom. It solves problems involving the development of animal husbandry in the republic and throughout the entire country.

Up until 1 January 1984, structural units of the institute itself and 12 experimental farms located in 9 rayons were subordinate to it.

The system of farms subordinate to our institute evolved at the end of the 9th and the beginning of the 10th Five-Year Plans, when its ranks were supplemented by poorly developed farms, almost doubling its land area. In order to increase their production levels and convert them into actual experimental farms it was essential to give some preference to them. At the same time the creation of a system of institutions of republic wide importance, in particular artificial insemination stations, was under way. This required considerable construction capabilities which, of course, hindered the development of some experimental farms. This redistribution of resources resulted in the goal directed development of, for example, the Laatre and Laena Sovkhozes such that their economic level is roughly what an experimental farm should have.

The 1 January 1984 reorganization of agricultural management in the republic reduced the number of farms subordinate to the institute by 3 and its land area by almost 30 percent. The farms now in the institute system have high production levels. In 1983 milk production per cow was 4,160 kg on the 9 remaining farms.

Up until 1983 ENIIZhiV could have been viewed as an informal scientific-production association which was the base for a republic system for raising livestock for breeding purposes, and which included experimental animal husbandry stations, etc. The institute used the resources allocated to it and was responsible for both science and production. In order to create a scientific

atmosphere at experimental farms, the institute trained and sent to these farms 20 candidates of science capable of handling the scientific tasks facing them.

Starting in 1983, material-technical supply and the determination of targets for experimental farms' sales to the state are conducted through RAPO. The resources necessary for experimental work are centrally allocated. The institute is entrusted with the financial and economic management of these farms. This system has essentially only been operating a year. It is therefore impossible to give it a final evaluation, but some shortcomings have been revealed. First of all, given such dual subordination the economic levers are in the hands of the RAPO, which approaches this category of farm primarily from a perspective of production and the fulfillment of targets for sales to the state. Experimental work is given low priority.

Dual subordination also causes a number of other problems. For example, the material incentives fund for awarding bonuses to workers is formed from profits on the basis of normatives I and II. The size of normative I for 1984 was determined centrally for the farms, while the size of normative II was determined by the council of the appropriate RAPO. I don't want to say that they were determined incorrectly. However, if the institute had decided this, or even made suggestions with a view to promising problems facing the experimental farms, then it would have had to correct the size of normative IIs going to individual farms.

The awarding of bonuses to experimental farm managers was also not completely thought out in 1983. Thanks to good weather conditions, the feedstuffs preparation plans were successfully fulfilled and the RAPOs were given bonuses for this fulfillment. They in turn awarded bonuses to workers who successfully prepared feed at experimental farms; the institute was not informed of this. Agronomists at farms were paid bonuses for feedstuffs preparation, while the quality of silage was not determined. It was later revealed that bonuses and feedstuffs quality did not correspond to one another at all farms.

It is perfectly proper to ask just what an experimental farm is and how it differs from an ordinary farm with high production levels. A simple answer can be given. At present an experimental farm is distinguished only by being the base for experiments and by having scientific and scientific-production units. One should add that the latter are not included in evaluations of farm activity, but that experimental farms must study these problems as they are subordinate to the institute.

This year, in accordance with the thematic plan, farms subordinate to ENIIZhiV are conducting well over 100 various experiments using thousands of head of livestock and poultry. This has become an additional and quite substantial duty for experimental farm managers, specialists and collectives. Payments for their labor, however, are made on the same basis as at ordinary farms.

One should keep in mind that far from all experiments have positive results or produce immediate economic effects. This was the case in the beginning stage of artificial insemination and is now true for the transplantation of embryos of agricultural animals. Remember that all experiments must be conducted under conditions of quite taut programs for production and sales which must be unconditionally fulfilled.



In addition to all this, a solution to social and service problems at scientific and scientific-production institutions has been and remains on the day's agenda. For example, 50 - 70 people are working at each artificial insemination station. Almost all of them need proper housing, kindergarten services, etc. Solutions to these problems present additional tasks to experimental farms.

Last year the base farms of artificial insemination stations kept 262 bulls, for which about 1,000 tons of the highest quality hay was prepared. At the same time, however, there is not a single statistical report about sperm production. How does one compare a purely production farm with, for example, the Tartu, if nobody suspects that the latter prepares at least 400 tons of the highest quality hay for bulls at these stations. This hay is actually used to increase milk production at ordinary farms. I will say that one can by no means always compare production and experimental farms.

In order to solve this problem the institute has worked out long term scientific and production scientific targets for each farm. Their fulfillment is followed and taken into consideration in calculating bonuses. However, these bonuses cannot exceed the set level. If an experimental farm's production results permit the payment of the maximum bonus, then it cannot be paid for scientific achievements. In other words, experimental farm workers are underpaid for the additional results.

One can venture to say that the pig and cattle raising technology used in our republic was created at our institute and its experimental farms, and scientists and specialists from our SKB [Special design office] participated in its development. However, this development work would have been very much easier if the institute's scientists had had at their disposal farms for raising both types of animals. Resources can be found for the construction and maintenance of these farms. The farms should, however, be released from taut production programs.

Up until 1983 SKB specialists participated in the designing of buildings for experimental farms. It was, in fact, quite effective participation. A procedure has now been established under which the institute's SKB is prohibited from designing new buildings; it only involved in the compilation of reconstruction plans. This was necessary, but it led to somewhat of a reduction in scientists' role in the development of new technology.

As a result of all that has been said, one is forced to conclude that our republic's agriculture has reached a level requiring the restructuring of science and the activities of its experimental base, but which would not separate these components (institutes and experimental farms).

The country is working out a standard statute on scientific production associations. In accordance with this statute, ENIIZhiv and its experimental farms and SKB would be an association subordinate to ESSR Agroprom. The latter would allocate resources, primarily for scientific work. It must compile a 5 - 10 year development plan for the scientific-production association, including experimental farms, regularly summing up the results of its activities, and, when necessary, making corrections.

Experimental farms' production and sales targets should come from these plans and primarily support scientific work. Parallel to this there should be a review of experimental farm management staffs and the basis of payments for their work and for awarding bonuses to scientific and auxiliary personnel at institutes. There is an urgent need to make corrections in the basis of payments to institute specialists working at experimental farms.

I by no means want to say that experimental farms should occupy some sort of privileged position and that their associates should receive high wages for a small amount of work. I simply want the creation of all conditions for fruitful scientific activity and that such activity be better and more effective than at present.

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## AGRICULTURAL MACHINERY AND EQUIPMENT

UDC 631.3:061.4

### EQUIPMENT DEVELOPMENT, TESTING, REPAIR

Moscow TRAKTORY I SEL'KHOZMASHINY in Russian No 5, May 84 pp 9-11

[Article by Chairman of the USSR State Committee for the Supply of Production Equipment for Agriculture L. I. Khitrin: "The Industrial Base of the Country-side"]

[Text] One of the main directions of the agrarian policy of the party is the all-round intensification of agricultural production and other sectors of the agro-industrial complex on the basis of the introduction of the achievements of science and technology, the strengthening of the material and technical base and all-out mechanization and electrification. As a result of the successful implementation of the policy of the party of retooling agriculture its economic potential became significantly stronger. For example, as compared with 1965 the deliveries of equipment for plant growing at present have increased by more than 2.5-fold and for animal husbandry by 6.5-fold, the power capacities have increased by threefold and have reached nearly 700 million hp, the power-worker ratio has approached 30 hp per worker.

At present in agriculture there are more than 2.7 million tractors, over 780,000 grain combines and 1.7 million trucks. In conformity with the Food Program during the 11th and 12th Five-Year Plans 3.74 million to 3.78 million tractors and 1.17 million grain combines and other agricultural machines worth 67-70 billion rubles will be supplied. The completion for the most part of the complete mechanization of farming and animal husbandry and the further retooling of the food sectors of industry are a prime task during the period to 1990.

The basic directions of technical progress for 1981-1990 in agriculture have been formulated and are being implemented in conformity with a very important major interdepartmental organizing document--the System of Machines.

At the first stage, during the 11th Five-Year Plan, the increase of equipment by nearly 700 descriptions is envisaged by it, while in all it contains more than 3,600 different machines and devices. Whereas in early 1983 a little more than 2,000 descriptions of them were produced, by 1990 another 1,600 types of new machines, or twofold more than during the preceding decade, have to be developed. The output of new and modernized high-powered tractors, highly productive grain combines, other self-propelled machines for various purposes, precision drills, clutchless wide-cut units, anti-erosion equipment of a new generation, as well as a set of machines which are necessary for the use of

of industrial technologies of the cultivation of corn, sugar beets, potatoes, vegetables and other crops and for the mechanization of labor-consuming processes in animal husbandry is planned.

Modern agriculture requires not the simple increase of equipment, but the development of such a system of mechanization, which would ensure the continuity and comprehensiveness of the performance of all agricultural operations at the best agrotechnical times and the complete replacement of manual labor in farming and animal husbandry. Integrated technological flow lines, which ensure the completeness of mechanization and make it possible to change radically the technology of the production of agricultural products, are taking the place of machines for the performance of individual operations and will be delivered in even greater numbers.

In connection with the systematic and comprehensive industrialization of kolkhoz-sovkhoz production the importance of the engineering and technical support of the countryside is increasing rapidly. And this quite naturally and objectively follows from the present state and tasks of technical progress in agriculture.

The increase of the unit power of equipment and of the design complexity of machines and the very organization of the performance of agricultural operations make it incumbent to treat in an entirely new way the division of labor among machine operators. Some of them, who know well the technology of the cultivation of agricultural crops, specialize in these operations, others carry out the repair and maintenance of machines, still others perform operations on the installation, start-up and adjustment of equipment or support the set of transport operations, namely the set, including all the loading and unloading operations and so on.

In short, the process of the further division of labor and the specialization of production is being actively continued, which first of all is creating the conditions for the significant increase of labor productivity in all sectors.

The enterprises and organizations of the specialized system of the agro-industrial complex--the USSR State Committee for the Supply of Production Equipment for Agriculture--are performing in this direction work on the increase of the level of the mechanization of agricultural production and the efficiency of the use of the great production and technical potential which has been created in the countryside.

In implementing the decisions of the May (1982), February and April (1984) CPSU Central Committee Plenums, the collectives of the enterprises and organizations of the USSR State Committee for the Supply of Production Equipment for Agriculture are directing their energy at creating for kolkhozes and sovkhozes the necessary conditions for the further increase of labor productivity, the efficient operation of the machinery and tractor fleet, the increase of the productivity of fields and farms and the achievement of high end results. All the activity of the workers of the system of the USSR State Committee for the Supply of Production Equipment for Agriculture is subordinate to the accomplishment of these tasks.

In the accomplishment of the tasks on the acceleration of scientific and technical progress in the countryside and the introduction of new machines and industrial technologies of the cultivation of agricultural crops a special place is being assigned to the conducting of state, preliminary and check tests of equipment. In the system of the State Committee for the Supply of Production Equipment for Agriculture there are now 31 machine-testing stations and 2 scientific research institutes for tests of tractors, agricultural machines and equipment for livestock farms. The task of giving a start in life to only the most highly productive machines, which are reliable and convenient in operation, has been set for them.

Important steps on the improvement of the qualitative indicators of agricultural equipment and the retooling of the sectors of the agro-industrial complex are envisaged in the decree of the CPSU Central Committee and the USSR Council of Ministers "On Measures on the Further Increase of the Technical Level and Quality of Machines and Equipment for Agriculture, the Improvement of the Use and the Increase of the Production and Deliveries of Them in 1983-1990." The USSR State Committee for the Supply of Production Equipment for Agriculture jointly with the USSR Ministry of Agriculture, the USSR Ministry of Land Reclamation and Water Resources, the USSR Ministry of the Fruit and Vegetable Industry, the Ministry of Tractor and Agricultural Machine Building, the Ministry of Machine Building for Animal Husbandry and Fodder Production, the Ministry of the Automotive Industry and other ministries and departments are taking specific practical actions on the fulfillment of the adopted decisions.

Materials, which reflect the activity of the State Committee for the Supply of Production Equipment for Agriculture on the promotion and introduction of new equipment, the organization of tests of machines and the increase of their technical level, reliability and durability, are presented in the Soviet section of the Sel'khoztekhnik-84 International Exhibition.

Various stands, special tracks, testing grounds, instruments and other means, which make it possible to modernize the operating loads, to optimize the operating conditions and to determine the technical and economic indicators of machines, have received extensive dissemination at the machine-testing stations and institutes for the increase of the quality and the shortening of the periods of the tests of machines. Several of them are displayed at the exhibition: the EMA-P portable measuring equipment for the automatic estimation of the power indicators of machines (Figure 1), the SIET-302 digital tachometer, the IP-154 fuel consumption indicator, the SIN-401 classifier of the load of assemblies of agricultural machines, the SIN-403 classifier of the modes of operation of equipment under operating conditions and others. One of the most interesting exhibits is the ARISA equipment for the recording of information during tests of agricultural units (Figure 2). It is designed for the storage of information on the expenditures of time by elements of the shift, the amount of consumed fuel and other indicators. The ARISA makes it possible to store information in an electronic memory through 14 channels over 10 hours.

The need for the highly productive use of the enormous fleet of equipment in agriculture is making increased demands on the repair and operating base and on the provision of such a preventive maintenance system, which would guarantee the maximum technical readiness of machines during the year with the least

expenditures on the maintenance of the equipment. All this requires productive, very precise equipment of the broadest range, the latest means of diagnostics and the use of modern technologies, accessories and instruments.

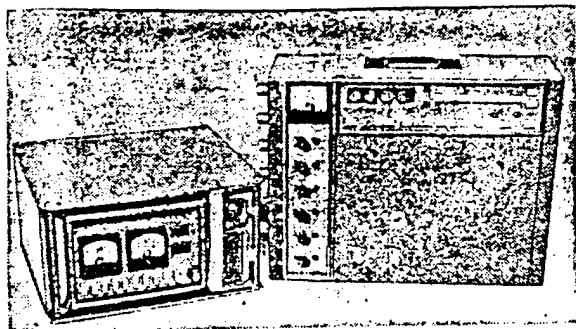


Figure 1. The small EMA-P equipment for the estimation of the power indicators of agricultural equipment during tests

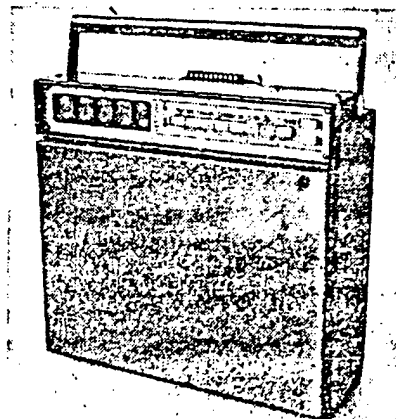


Figure 2. The ARISA equipment for the gathering and processing of information during the operational and technological evaluation of agricultural equipment (automatic time keeper)

At the exhibition specialists can familiarize themselves with the most advanced and promising means of the engineering and technical maintenance of the machine and tractor fleet. Of them I would like to note the stand for the running in of the driving axles of K-700 and K-701 tractors (KI-17977 GOSNITI), the OM-22616 GOSNITI steam-operated water cleaner, stands for the testing of the hydraulic units of high-power tractors (KI-4815M GOSNITI), turbo-generators (KI-88777), the KPP driving axle of tractors like the K-700 (KI-13805 GOSNITI), the MZ-3904 and OZ-1929 mechanized refueling units and others.

Such highly productive means for the repair of the machine and tractor fleet as the stand for the grinding of the valves of motor vehicle and tractor engines (OR-6687M GOSNITI), which ensures identical pressure on the valves being ground, the KI-15711 GOSNITI stand (Figure 3), which makes it possible to test 12-section fuel pumps with a nominal cyclical feed of up to 200 mm<sup>3</sup> at an injection pressure of up to 50 MPa and the KI-5274 running-in and decelerating stand for the testing of the engines of high-power tractors are of particular interest.

Many diagnostic means--from simple devices to complex electronic systems--were shown at the exhibition. Their use makes it possible to shorten the idle times of machines due to technical troubles, to decrease the amounts of capital and other types of repair, to reduce fuel consumption, to decrease the expenditures of assets for the reconditioning and maintenance of the machine and tractor fleet. The electronic diagnostic unit (KI-13940 GOSNITI) and the stand for

tractors of the most different makes, including high-power tractors (KI-8948), will undoubtedly interest specialists.

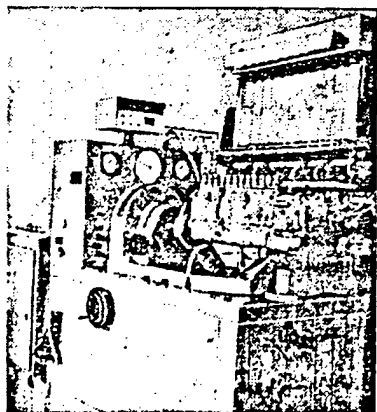


Figure 3. The KI-15711 stand for the testing and regulation of diesel fuel equipment

The reconditioning of worn out parts is a significant source of the replenishment of the resources of spare parts and the increase of the technical readiness of the machine and tractor fleet. The use of modern technologies makes it possible to recondition parts with a quality which is not inferior to new parts. The production cost in this case comes to 60-70 percent of the production cost of new items. The reuse of parts worth 1 million rubles, which have served their life, will save the national economy nearly 2,000 tons of rolled metal. In 1983 the enterprises of the USSR State Committee for the Supply of Production Equipment for Agriculture reconditioned worn out parts worth nearly 500 million rubles, which corresponds to the deliveries of new spare parts worth approximately 800 million rubles. In the future these amounts will increase significantly.

The main directions of the development of the subsector are the setting up of specialized enterprises, shops and sections, their furnishing with high precision and highly productive equipment and the extensive use of the most advanced, efficient methods: the flame and plasma spraying of durable metallic powder materials, laser hard-facing and others.

The Remdetal' All-Union Scientific Production Association and its pilot plants display at the exhibition modern equipment for the reconditioning of worn out parts by flame spraying, laser hard-facing and hardening, for the reconditioning of parts like a "shaft" by the contact welding of a strip and the method of the flame spraying of powder materials, the base members of motor vehicles and tractors by electrocontact welding. The prototypes of mechanized flow lines of the reconditioning of the crankshafts of motor vehicle engines, cylinder blocks and sleeves will attract particular attention of the visitors.

The service for the installation, start-up and adjustment, repair and maintenance of the equipment of livestock farms and complexes is developing dynamically. The total amount of this work in 1983 exceeded 2 billion rubles.

The specific nature of the installation of equipment for the mechanization of animal husbandry and fodder preparation requires the performance of a large amount of work directly at the facilities. In this connection the productivity and quality of labor depend in many ways on the technical equipment of installation organizations. A mobile workshop (Figure 4), which has 150 descriptions of accessories and tools, was developed by specialists of the VNIITIMZh [expansion unknown] on the basis of the chassis of trucks like the GAZ. This makes it possible to perform practically all the types of operations on the installation and dismantling of farm equipment. Starting in 1985, the Biysk Machine Building Plant will begin the series production of such workshops.

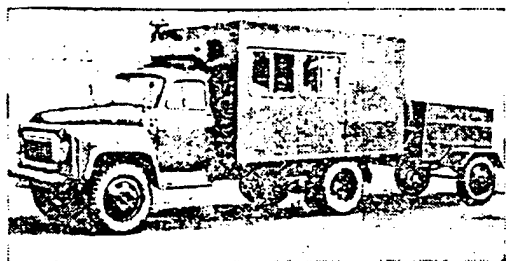


Figure 4. The MZh-P-2,5 VNIITIMZh workshop for the maintenance of farm equipment

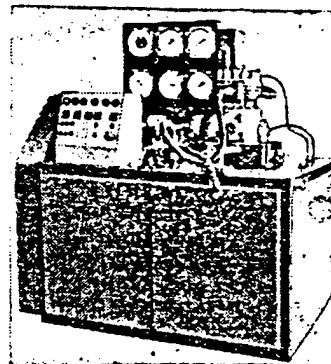


Figure 5. The stand for the running in and testing of the compressors of refrigerating plants

Several types of equipment for the production sections of the service stations of animal husbandry--stands for the running in and testing of the compressors of refrigerating plants (Figure 5), the assembly and testing of induction motors, the assembly and adjustment of start-protection devices and others--are displayed at the exhibition.

Participation in the exhibition is of great important both for each exhibiting enterprise and for the system as a whole. Soviet and foreign specialists will acquaint themselves here with the best models of equipment, instruments and machines, which have been developed at the enterprises and organizations of the USSR State Committee for the Supply of Production Equipment for Agriculture and will obtain the opportunity to study its activity on the improvement of the engineering and technical service of agriculture and other sectors of the agro-industrial complex and on the accomplishment of the tasks which are connected with the USSR Food Program.

The Sel'khoztekhnika-84 International Exhibition is an important organizational and technical measure, which, undoubtedly, will have its positive influence on the rate of technical progress in the countryside and will make it possible to reveal more thoroughly the state and the basic directions in the accomplishment



of the varied tasks of the retooling of the countryside, the accomplishment of technical progress and the complete mechanization and electrification of agricultural production.

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## FORESTRY AND TIMBER

### FULL UTILIZATION OF TIMBER RESOURCES DISCUSSED

Moscow FINANSY SSSR in Russian No 4, Apr 84 pp 22-25

[Article by T. A. Kondran'yeva, junior scientific workers of NIFI [Scientific Research Institute of Finance]: "Stimulating the Efficient Utilization of Timber Resources"]

[Text] Among natural resources an important role is played by the forest, which comprises a significant portion of the national riches of our country. The USSR has at its disposal almost one-fourth of the forest land of the planet and is in first place in the world in terms of wood reserves. Despite the supply of timber resources the goal of utilizing them efficiently is important for our economy. After all, each year enormous (about 1 billion rubles) and ever-increasing resources are allocated for the development of the timber industry. The effective use of existing timber resources will allow us to economize on great state resources. Moreover, if timber resources are dealt with inefficiently, it will be necessary to introduce additional volumes into economic turnover which may be of a lower quality or located at a further distance. Under conditions of ever-increasing demand by the national economy for wood and wood products this would incur serious losses.

A large quantity of valuable wood raw material remains in timber felling areas in the form of poor timber, waste wood and so forth. These losses often reach 30-40 cubic meters per hectare of timber area.

In order to utilize timber resources more fully it is essential to strengthen the significance of economic factors. The most important economic category regulating interrelations between two main branches of the timber complex--the timber industry and the timber-procurement industry--is payments for timber supplied in the form of standing timber. Under conditions of an increased role of commodity-monetary relations, the cost law and individual cost factors in the development of our country's economy, payments for wood supplied in the form of standing timber must occupy the corresponding position. The effect of fines levied against timber procurers who violate the rules of timber use must become more palpable.

In order to increase the interest of timber procurement enterprises in the better use of the timber felling fund, as of 1 January 1982 a new price list was introduced--Number 07-01 entitled, "Taxes for Wood of the Basic Tree Types Supplied in the Form of Standing Timber." It foresees growth of the average

level of payments for wood supplied as standing timber equalling a factor of 1.8; as a result expenditures for the timber industry will be 80 percent covered by these payments. Expenditures can be fully repaid with the given payments only with a consideration of mobilizing the resources that are created within the timber industry itself. But since under conditions of its intensification expenditures increase each year, total payments for standing timber supplied will not suffice in a few years to cover all expenditures even with a consideration of the resources of the timber industry itself.

Although the new price list further differentiates timber taxes depending upon the timber tax belt, the shipping distance and the types and size of timber, the stimulating role of payments for wood supplied in the form of standing timber will be increased insignificantly. The slight increase in fines according to the new regulations instituted on 1 January 1982 concerning supplying standing timber in the forests of the USSR also does not increase the interest of timber procurers to more effectively utilize timber felling funds.

Similar measures have already been taken in our country but did not yield the desired results. For example, in the 1967 reforms of wholesale prices for products of branches of the procurement industry, prices for standing timber increased by a factor of 2.3 and reached about 11 percent in timber-product costs. However, its supply was about 85 percent covered by expenditures in the timber industry. There was also a more thorough differentiation of timber taxes according to rent-formation factors. In 1974 in our country timber taxes were improved once again but without alterations of their average levels.

Numerous reexaminations of timber taxes did not increase their role in the economies of the timber industry and the timber procurement industry because they did not touch the methodological bases for building payments for wood supplied in the form of standing timber. Today we have all the prerequisites for a radical restructuring of this system of payments. We feel that this restructuring should be oriented toward bringing the structure and mechanism of action of timber taxes in line with their economic content.

Payments for wood supplied in the form of standing timber have existed in the Soviet Union for over 30 years, but their economic content is still interpreted differently. Economists who reject attributing any type of price to standing timber feel that these payments reflect varieties of differentiated rents. The supporters of the opinion that standing timber has a price admit that payments are a monetary expression of cost, i.e. of value.

In our opinion, if the standing timber supplied to timber procurers is the product of the timber industry and if publicly-essential labor expenditures create its cost, then the latter must have a monetary expression (price). But it does not at all follow from this that modern timber taxes which determine payments for standing timber supplied are these prices.

During each examination of average taxes the basic premise was that total payments for standing timber be reimbursed from expenditures used to manage the country's timber industry as a whole. There was no discussion of including

a certain percentage of savings essential for expanding reproduction within the timber industry. In addition, since prices in the timber procurement industry are established on the basis of the expenditures of enterprises working under average natural conditions, differential rents in calculating average taxes are also not taken into account. The differentiation of taxes according to rent-formation factors within the limits of their average sizes, not exceeding expenditures for the management of the timber industry--this is an attempt to remove supplementary income developed by timber procurers under favorable weather conditions.

Current timber taxes cannot be considered prices for basic production in the timber industry--standing timber. The recognition of payments for wood as its price requires the corresponding construct and a reflection in prices for products of consumer enterprises of another supply object. The prices for standing timber must correspond to the level of publicly-necessary expenditures for the reproduction of timber resources, for the purpose of which they must be constructed with a consideration of the cost of these products and of the economically-based level of production profitability. It is also essential to consider differential rents arising during the stage of growing forests.

Prices must be differentiated according to various types of wood. Because of the very different conditions for timber industry production in various regions, it would be expedient to differentiate these prices according to zones, with the base being expenditures in enterprises working in the worst natural conditions of a given zone. We have in mind not the very worst enterprises but those in which production volume and technical supplies are close to the average indicators for the branch. To have a certain stability prices should evidently be established for a period of 5 years--the period in which a plan of economic and social development is in effect.

It would probably be proper to utilize fixed (rent) payments to establish zonal prices for standing timber for the purpose of withdrawing intra-zonal rents from timber procurers who exploit timber areas that differ in quality and location. They would be made not by all timber procurement enterprises but only by those which receive differential income under especially favorable natural-geographic conditions. These payments must be made into the state budget from the profits of timber procurers, which will allow for corrections related to the size of supplementary clear income that does not depend on the activities of enterprises.

For timber procurers standing timber supplied to them is a raw material, the cost of which must be reflected in the production cost of the procured product. But right now the production cost includes payments for such timber, distortedly reflecting expenditures for the timber industry and not securing savings to expand reproduction within this branch. By the same token, prices for the products of the timber procurement industry do not correspond to the level of publicly-essential labor expenditures for the reproduction of timber resources.

We feel it would be correct to include the cost of standing timber acquired by timber-procurement enterprises from timber enterprises in the cost of

wood being procured. In contrast to the existing practice of paying according to timber taxes established in accordance with cost, prices interest timber procurers more in terms of their efficient utilization. In restructuring payments changes will be made in calculations of the production costs of wood being procured. The article used today, "Payments for Wood Supplied as Standing Timber," will be replaced by another, "Expenditures for the Cultivation and Upkeep of Timber." It will reflect the cost of raw materials acquired by timber procurers from timber industry enterprises.

Thus, all timber-procurement enterprises, regardless of their financial status, will pay for standing timber according to cost. In addition to this supplementary differential income received as a result of especially favorable natural-geographic conditions will be put into the state budget according to fixed (rent) payments. The proposed system will secure, on the one hand, a more complete reimbursement of expenditures for the timber industry and on the other--maximal withdrawals of differential rents developed by timber procurers.

Scientifically-based prices for standing timber can increase prices for timber products in some cases. Here we must take into account the fact that increasing prices for products of branches that utilize natural resources reflect a completely rightful tendency in the face of an expanding scale of consumption and a simultaneous deterioration of quality composition and territorial distribution. In the USSR timber resources are valued at a much lower level than in other socialist countries. The proportion of payments for standing timber within the price for total timber comprises about 10 percent in the Soviet Union, whereas in Hungary and Bulgaria the corresponding figures are 35 and 38 percent respectively. It is essential to establish prices for standing timber on a level that meets its economic content in order for it to be utilized efficiently by the consumer.

The transformation of payments for standing timber into its price presupposes changing the objective of the payment. Now payments are recorded in the budgets of union republics with subsequent transfer to local budgets. In our opinion this type of system is not justified either economically or in organizational terms. After all, the wood that is delivered to timber procurers each year in the form of standing timber and that determines the size of the timber felling fund is the product of the timber industry. Profits from the sale of products should be passed on from consumers (enterprises of the timber procurement industry) to producers (enterprises of the timber industry). This will undoubtedly increase the interest of timber industry enterprises in more correct calculations and a more complete withdrawal of payments, which in the final analysis will more actively stimulate timber procurers to utilize the timber fund more efficiently.

The transfer of funds for standing timber supplied by timber industry enterprises, in the face of changes of the existing order for financing the timber industry, will require the development of redistribution relations within the timber industry branch; it would be expedient to implement this by means of a special fund of financial resources on the level of USSR Gosleskhoz [State committee of the timber industry]. Resources must be redistributed

because in some of our republics, krays, oblasts and rayons the volume of delivered timber and the size of expenditures for the reproduction of timber resources do not depend on each other. In many timber industry enterprises of the central and southern parts of the European part of the country, where the issue of timber is relatively small, expenditures for timber renovation operations are significant. Profits from the sale of standing timber will not reimburse the expenditures of these enterprises.

In order to strengthen the stimulating role of payments for standing timber sanctions in the form of fines are utilized--forfeits for violating the rules of timber use. Their size depends on the tax costs of the timber.

For example, for incomplete felling in the form of compact plots timber fellers pay a single tax cost of the timber left standing. When individual trees that should have been cut are left standing in the timber felling area the forfeit is calculated as triple the size of the tax cost of this timber. For felling without obtaining timber felling cards the timber procurer is obliged to pay the tenfold tax cost of cut timber according to the first class tax in all timber taxing belts. Forfeits are levied in an absolute (hard) sum--50 rubles for each hectare of young vegetations that is destroyed, 150 rubles for each hectare of timber that is damaged or destroyed, and so forth.

In the timber procurement enterprises of the RSFSR (timber procurers of USSR Minlesbumprom [Ministry of the Timber and Paper Industries], USSR Gosleskhoz, USSR MVD [Ministry of Internal Affairs] and other ministries and departments) the sum total of forfeits paid annually keeps increasing and today exceeds 25 million rubles. However, in practical terms this does not have a palpable affect on timber procurers and does not keep them from violating the Regulations for Submitting Standing Timber in USSR Forests.

After the increase in taxes for standing timber of 1 January 1982 there was an increase in forfeits calculated both directly according to the tax costs of timber and in absolute (hard) terms per violation. However, this also will not enable us to influence timber procurers to the necessary degree. In our opinion, the size of the forfeit must correspond to the size of the loss, which does harm to the timber industry and the entire national economy with one or another violation.

Changes in the sizes of forfeits for violations of the Regulations for Submitting Standing Timber will help to more efficiently utilize the timber felling fund only if the optimal source of payments is determined: balance profits; a portion of profits directed into the fund for economic stimulation; profits earmarked for developing a fund of material incentives; and wages of directors or guilty parties.

At the present time forfeits are paid out of balance profits and for this reason with an increase in the sum total of forfeits there is a decrease in the size of profits in the enterprise. But forfeits curtail above-plan profits even before their distribution. In the same way some of the responsibility for violations of the Regulations for Submitting Standing Timber are transferred to the state budget in that there will be less profit if

forfeits must be paid. The sum total of forfeits imposed on or obtained by an enterprise is reflected in bill number 99, "Profits and Losses." This is why the sum total that must be paid for timber violations can be fully or partially liquidated by means of the debtors of a given enterprise. In this case the responsibility of the timber procurer for violations will hardly be noticeable.

In order to strengthen the effect of forfeits on the results of the economic activities of enterprises it is expedient to pay them out of the fund for material stimulation instead of proportionally out of all funds for economic stimulation of an enterprise. The fact is that today considerable resources from the fund for production development are being directed at building shops to process low-commodity timber and production wastes. The development of such shops is an important goal of the timber procurement industry and a curtailment of resources in the production development fund can have a negative effect of this. By decreasing allocations into the fund for socio-cultural measures and housing construction due to non-productive expenditures we would decrease the possibility of improving housing and cultural-living conditions for workers of timber procurement enterprises. And in this branch the problem of retaining cadres is already acute. Payments of forfeits from the fund of material incentives will be a measure that will affect the entire collective of the enterprise which is directly interested in the use of the timber felling fund. Specific guilty parties must answer for timber violations, and this can be achieved by making the source of forfeit payments the bonuses allocated to them from the fund of material stimulation.

Another source is the wages of directors of enterprises and parties guilty of the more significant violations. At the present time fines are levied against responsible parties for violations of the Regulations for Submitting Standing Timber in USSR Forests. But this helps poorly. In comparison to the size of the loss such fines are symbolic in nature. Let us say that in 1982 the Vologda Administration of the Timber Industry, having examined felling areas, discovered many violations tolerated by timber procurers and instituted forfeits in significant amounts. Monetary fines--one third of the salary of each--were levied against the directors and senior engineers of five timber procurement enterprises in which the largest number of violations were discovered. We feel that this type of deficit does not encourage the forestalling of timber violations. It would be expedient to levy fines according to incurred losses but not higher than total salary for 3 months.

We need effective measures of economic action against individual directors and guilty parties as well as against the results of work of the entire collective. At the present time the material responsibility is still clearly insufficient not only for timber procurement enterprises which violate the regulations of timber use but also for timber industry enterprises that are obligated to expose these violations. Timber industry enterprises do not fully utilize their rights of controlling the activities of timber procurers and do not strictly require order in timber felling areas. Meanwhile what we need is strict controls, including forbidding timber procurers to cut timber if they do not clean up the felling area and participate in reforestation work. In our opinion, there should be a strengthening of the material

interest of timber industry enterprises in bringing order to timber felling while at the same time increasing their material responsibility in cases in which violations tolerated by timber procurers are not fully exposed. For this we should change the object from which payments come for violations of the Regulations for Submitting Standing Timber in USSR Forests.

The existing order for including forfeits in the budgets of union republics seems to us not to have sufficient basis. We share the point of view of N. G. Shakhov<sup>1</sup>--a portion of sanctions in terms of fines must be placed directly at the disposal of organs of the timber industry. All fines related to compensating for losses and damages related to state forests should be used on measures to eliminate violations and to make up for losses carried by the timber industry.

In the timber industry, which operates on budget financing, the size of resources allocated for worker bonuses is limited. The use of a certain part of forfeits as an additional source of rewards is completely correct. The transfer of a certain portion of fines to the organs of the timber industry will facilitate a strengthening of controls on the part of timber enterprises, i.e. a more complete exposure of violations.

The change proposed by us in the structure of the mechanism of payments for standing timber and in the system of sanctions for violations of the rules of timber use will increase their role in the economy of the timber industry.

<sup>1</sup>Shakhov, N. G. "Voprosy ekonomiki lesokhozyaystvennogo proizvodstva" [Questions on the Economy of Timber Industry Production], Moscow Technical Timber Institute, 1974, p 56.

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## FORESTRY AND TIMBER

### ROUND TABLE DISCUSSION ON PROCESSING PAPER WASTE

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 30 May 84 p 2

[Article from the letters department of SOTSIALISTICHESKAYA INDUSTRIYA:  
"Paper and Waste Paper": "A Round Table of SOTSIALISTICHESKAYA INDUSTRIYA"]

[Text] "Probably every schoolboy now knows that a ton of waste paper saves 4.5 cubic meters of fresh-cut timber. But take a closer look. How much old paper and cardboard is still being burned at garbage dumps and in the yards of apartment houses and stores! One can spend a lot of time and effort including in the rising generation a sense for economy and an economical attitude toward national resources, but at times the fine appeals are nullified by these paper bonfires." This is the letter of V. Smirnov, labor veteran from Lipetsk, and it is one of the many whose authors report with alarm on this sort of practice and speak of the need to use waste paper, a very valuable raw material, carefully. What is preventing this?

To discuss this question put forward by our readers, we invited representatives of the interested ministries and departments. Participating in a "round table" meeting in the editor's office were V. Petrov, deputy chief of the department for the timber industry and forestry, and I. Sorokin, chief of the subdepartment of the department for utilizing secondary resources, both from the USSR Gosplan; Yu. Sechin, chief engineer of the USSR Main Administration for Secondary Resources [Soyusglavvtorresursov] of the USSR Gossnab; V. Musinskiy, deputy chairman of the department for the timber industry complex of the State Committee for Science and Technology of the USSR Council of Ministers [GKNT]; P. Kotikov, head of the administration of the timber and pulp and paper industry of Gosstandard [State Committee for Standards of the USSR Council of Ministers]; V. Zhuravlev, staff member and director of the production administration of the pulp and paper, and wood processing Industry; V. Chichayev, director of the VPO [All-Union Production Association] "Soyuzpolimerbummash" of the Ministry of Chemical and

Petroleum Machine Building; and G. Sofronov, director of the VO "Soyuskniga" ["All-Union Association of the Book Trade"] of the USSR State Committee for Publishing Houses, Printing Plants and the Book Trade.

We will not bother the reader with an exposition of the arguments and departmental positions. We will attempt to present some of the results of a doubtlessly useful discussion.

To hand it in or not? This is by no means rhetorical question arises for many of our readers when they encounter the long lines at the receiving centers and the serious shortcomings in their work. To some degree, all of this is explained by the unpleasant fact that one-third of personal waste paper goes unused.

At "Soyusglavvtorresursov," they are busy with arithmetic calculations. The potential number of persons turning in waste paper per receiving center per year is 35,000 or 100 per day. That does not seem so bad. But those turning in the paper, returning from work and unaware of this saving arithmetic, stand in lines not foreseen by the statistics. Another reason for this is that the nearest receiving center is often closed.

This is not the main trump of those comrades responsible for collecting waste paper whenever they become involved in the unpleasant conversation about lines. But how deceiving figures can be at times! In Moscow, for example, about 60 receiving centers do indeed open every year. But almost as many close because of the dilapidated premises and for other reasons. The absolute increase is only a few units.

So much for arithmetic. And procurers should not, it seems, be concerned with overly-optimistic estimates, but with creating realistic conditions for the unhindered delivery of waste paper. And thereby not just truly expand the network of receiving centers, something that today's conditions demand, but also improve the quality of their work. Why not, let us say, organize an expanded taking of waste paper on Saturdays and Sundays, as is done in the GDR, for example? A delegation of Gosplan representatives had the occasion to travel there to study their experience. There the delegation saw mobile receiving centers that go out into the housing blocks at times convenient for the people. It also saw that the population brings in old paper and cardboard of various sorts; different prices are set for different types of waste paper. Procurers have only to classify the paper, and the processing enterprises are sent waste paper that has been divided into 20 or more varieties (we have only 10), which makes it possible to utilize it much better and more expeditiously.

One cannot say that our procurers did not learn anything from the example of their German colleagues. Mobile receiving centers appeared in the Baltic region and in Moscow. As a whole, however, the system of collecting waste paper is being improved slowly.

The participants in the "round table" discussion were unanimous in that the exchange of waste paper for books has proven itself. It is now operating in 70 cities. But here too, judging by readers' letters, not everything has been worked out. People often cannot turn in the waste paper that they bring, primarily because of the lack of subscriptions. At the same time, at the end of last quarter, Moscow stores had R4 million in books for exchange. To be sure, subscriptions were taken out. But by no means did procurement organizations hurry to put them into circulation. It seems that without this they are coping with a plan that has not been stepped up so very much. But why not organize the exchange of waste paper for books directly at the receiving centers? That would pull the rug out from under the feet of those speculating in subscriptions, about whom readers are writing with indignation. For a long time now, "Soyuzglavvtorresursy" have been intending to introduce the "direct" variant. So far, however, only a local experiment is planned in two cities. The general consensus is that the slowness is in no way justified.

Slowly, as if reluctantly, the mechanism of procuring waste paper is getting unwound. And not just among the population. Excluded are the paper wastes of many institutions, for whom no plan is established for deliveries. Completely forgotten are the housing service centers that provide only 80,000 tons of waste paper a year throughout the country--a drop in the bucket! What is the problem?

#### Searching For An Excuse

Without fail, the procurers respond to criticism with a counterattack. Why, they say, collect more waste paper when as it is the processing enterprises often refuse to accept raw materials? That appears to be a solid argument. But if one takes a closer look, in a number of krays and oblasts the planned volume of waste paper to be collected does not satisfy the "appetites" of future processing lines.

Having no faith in the paper industry, which is observing from the sidelines, the USSR Gosplan has taken it upon itself to construct a portion of these lines. A laudable initiative, and it will be quite beneficial. But why should the USSR Gosplan do what is the direct responsibility of the USSR Ministry of the Timber, Pulp and Paper, and Wood Processing Industry.

In the current five-year plan, this ministry has not introduced a single new enterprise for processing waste paper. In total, the initial task for increasing capacities was 200,000 tons a year short of being fulfilled.

The basic argument that this ministry loves to present to justify the developing situation is that of a lack of funds. They were needed to construct very large complexes in Ust'-Il'msk, Arkhangel'sk, Bratsk, etc. We will not argue, it may be that the industry staff had a better view of that. But construction of the mentioned complexes is now nearing completion and resources are being released to produce waste-paper processing systems. And what about it? The Ministry of the Timber, Pulp and Paper, and Wood

Processing Industry its estimates through official channels, and they show that there will be no fundamental changes in the next five-year plan.

No, waste paper is not dear to the hearts of those in the paper industry. The reason is simple. Basically, what they produce from it today is, to put it lightly, not the best cardboard and low-quality paper. Profits are meager. But there is another way, and they are quite familiar with it in the industry. The most promising solution is to add waste paper in making high-quality paper, say, for newspapers or magazines. As is done, for example, in some CEMA countries. And such a method is also completely feasible for us technically. But economically?

At the Balakhninskiy Pulp and Paper Combine, they attempted to introduce the composite use of waste paper in making newspaper paper. But the project had to be deferred, otherwise the enterprise would have suffered significant losses. At today's wholesale price for waste paper, the mass made it turns out to be quite a bit more expensive than that made from wood.

Several years ago, the Ministry of the Timber, Pulp and Paper, and Wood Processing Industry put this question to the State Committee on Prices, made no headway and let it go at that.

But let us suppose that this question can be solved. However, to add waste paper in the large-scale production of high-quality paper and cardboard, it must first be properly processed. Years, indeed decades have passed since scientists developed all of the essential technological processes, in particular the removal of dyes and other coatings, through flotation. They calculated the advantages of introducing it and found that refined waste paper can replace almost one-third of bleached cellulose in the best typographical papers and about half in writing papers. Not to mention the fact that it is quite satisfactory for making sanitary and hygienic papers.

To this day, however, machine builders have received no orders for producing installations to refine waste paper. There are not even weak attempts by processors to make use of another extremely advantageous method, the thermodispersive processing of waste paper.

Quite clearly, the "round table" discussion showed that the Ministry of the Timber, Pulp and Paper, and Wood Processing Industry is not as interested as it should be in a fundamental increase in the processing of waste paper. It is for just this reason that generally good plans remain just on paper for years. But this departmental position does not correspond to the overall course in favor of a wide application of secondary resources and preservation of our country's timber riches.

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